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Address.

SPECIALISM IN MEDICINE.*

FREDERICK C. SHATTUCK, M.D.

Jackson Professor of Clinical Medicine, Harvard University, etc.

BOSTON.

When, under the influence of faulty metabolism or other cause, pessimism gets the better of us, we sometimes quote with approval the remark of Solomon the Wise, that there is nothing new under the sun, without reflecting that Solomon himself was probably not feeling his best at the moment. Something in his internal or large domestic economy had gone wrong, I suspect. Possibly he had to write an address! However, this may be, let us suppose him suddenly brought for a visit to one of our large cities. He would certainly find that advance in knowledge has brought about great change in our relation to things, be the things themselves never so ancient or immutable. Solomon was at the *fin* of his *siècle,* but the old sun looks down on a different world at the *fin* of this *siècle.* He could not fail to be impressed by the subdivision of labor of the present day in every branch of industry. Were the great king to be seized with sudden abdominal pain he would surely have the benefit of a surgical and a medical opinion. Another doctor would make a blood count, another a urinary examination, another, perhaps, would examine his vomitus or stools; another, use the X-ray. If his abdomen were opened the pathologist would report on cultures from the cavity, or on the structure and nature of any suspicious tissue. It would, in a word, be demonstrated to him that specialization has taken place in the science and art of medicine, as in other sciences and arts. And Specialism in Medicine is the theme which I have selected for brief and, I fear, inadequate consideration during the time your president has done me the great honor of delivering you into my hands.

A line of cleavage appeared first perhaps between medicine and surgery; and it is curious to note that nowhere has the line, at least in name, in the past been so closely drawn as in England, where more minute specialization has met with considerable opposition. Toward this result the anomalous fact that the degree of Doctor of Medicine has in England been only a University title, must, it seems to me, have contributed. Practically everywhere else in the civilized world the practitioner is a Doctor of Medicine. Although we have a fair working knowledge of the distinction between medicine and surgery, I, at least, find myself unable to frame a satisfactory definition of the distinction. Some thirty years ago, during my medical studies, I had the pleasure of meeting the late Mr. Holden, then of Bartholomew's Hospital, and was asked by him whether I meant to be a physician or a surgeon. On my reply that I looked forward to being a physician, he remarked, "Don't you do it; the surgeon can do all the physician can, and more too." When I repeated this remark to dear old Sir Henry, then Doctor, Acland, he dryly remarked that he should be very grateful to Mr. Holden if he would come and teach him how to do some of his work. Much more recently I have heard of a very distinguished London surgeon defining a surgical case as one which paid him two guineas. Anesthesia greatly enlarged the bounds of surgery, and yet twenty-five years ago there was not a pure surgeon in America. The surgeon did as much general practice as he could get, including midwifery. Surgical cleanliness has worked a great change in this respect, and the end is not yet in sight. We see men to-day, even in relatively small communities, confining themselves strictly to surgery. Without much exaggeration one can say that it is as hard to-day to live on medicine alone as it was twenty-five years ago to live on surgery alone. "Belly-ache" is now a surgical disease. I know of a child with pneumonic pain referred to the right iliac region being operated upon for appendicitis. A few years ago a woman was sent into the surgical wards of the Massachusetts General Hospital for operation, perhaps for extrauterine pregnancy. The surgeon, who had had a large general experience, noticed wrist-drop and a blue line on the gums, and transferred her without operation to my wards. So safe now-a-days is the use of the knife under proper precautions that there is temptation to use it for purely diagnostic purposes. Just when to yield to and when to resist this temptation requires good judgment and general knowledge. The heart is practically the only viscus which remains the exclusive province of the physician. That organ is more tolerant of insult than has been supposed, and who shall dare to say that, impossible as it seems now to us, a contracted mitral valve can not be slit without causing death? The real line between medicine and surgery is one thing; the practical line is another. The last quarter century has seen them approximate notably, but they will not coincide until knowledge is perfect. The establishment of a German journal devoted to the borderlands of medicine and surgery is interesting.

Obstetrics, again, early became a specialty; though in rather a different way. For parturition is a physiologic process, and in many countries a large proportion of births are now under the sole charge of midwives. In this country the general practitioner has clung to his obstetrics as a necessity for family practice, oftentimes bewailing his hard fate and interrupted nights, meanwhile. Of late years we see in the larger centers a tendency of obstetrics, at least among the rich, to go into the hands of a few men, who, on the completion of the puerperium, withdraw, the family physician resuming his place. This is a practice which, for obvious reasons, can obtain only in large communities. With entire ap-

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propriateness we see these obstetricians also busied in diseases peculiar to women, many of which are the outgrowth of one or more previous pregnancies.

Gynecology is of almost unique interest from the point of view of Specialism in Medicine, and a medical Gibbon could write an interesting book on its Rise and Fall. Not many years ago it was, I am tempted to say, the most in evidence of any specialty into which enterprising young men were ambitious of crowding themselves before the ink on their diplomas was scarce dry. The mills of the gods grind no less fine than they did, but, I think that they grind quicker in these electric days. Pure gynecology to-day scarcely exists. Many deviations from the normal in the female pelvis give rise to no symptoms until the general health begins to fail, from one cause or another. Such cases belong to and are best treated, ordinarily, by the wise general practitioner. If I read the signs of the times aright, what may be called pelvic tinkering, which has been so much practiced in the last decades, is suffering from a rapid decline. What is really necessary can safely and best be left in the hands of the obstetrician alone or aided by the general physician; and major gynecology, the great bulk of which involves laparotomy, seems to be going where it belongs—into the hands of the general surgeon. It may all have been a necessary sequence in the evolution of knowledge, or I may be ignorant or prejudiced, but I can not look at the groping course of gynecology as a triumph of human intelligence.

How many women have been unnecessarily deprived of necessary sexual organs; how many have had their attention fixed on these organs, which in the male nature has left in evidence, but in the female has modestly hidden away, affording, like all hidden or veiled things, wide play to an awakened imagination!

On the eve of reading this I see the following words just from the pen of Prof. Howard Kelly, of the Johns Hopkins, certainly a competent witness: ". . . the general adoption of the principles of asepsis leaves the barrier between general surgery and gynecology a purely artificial one, and one which must inevitably, sooner or later, be broken down. My advice, therefore, to all gynecologists is to study general surgery and become general surgeons first."[1]

Surgery and obstetrics seem likely always to hold their places as great divisions of medicine as a whole. Let me now turn to the subdivisions of medicine, as contrasted with surgery and obstetrics, and try to consider specialization in connection with its etiology. The first place among the causes for the increase in specialism doubtless belongs to increase in knowledge. A half century ago James Jackson, than whom my native city has produced no wiser physician, said that there was more actually known in medicine than the mind of any one man could grasp. If this was true fifty years ago, how much more true is it of the present day. The field is so large that no one man can possibly oversee and bring it to full productiveness. Each crop needs a separate head of the first class. But here, perhaps, as well as elsewhere, I may state that I trust nothing I say can be construed into any slight on the general practitioner, especially on the men who in small communities are liable to be called upon to deal with any emergency of any kind pertaining to medicine in its broadest sense.

All honor to those to whom honor is due. Those of us who dwell in large cities and have the advantage of the presence of experts in every line at instant call are, I believe, keenly alive to the danger of one-sided development to which we are exposed, and to the lack of self-reliance and resource following from this, when we get off our narrower or wider beaten track. I simply mean that the highest excellence, knowledge and skill in all branches of medicine are simply impossible of attainment by any one man—a proposition which must command universal assent.

The specialty of neurology seems to me a case in point. Great advances have been made in our knowledge of the anatomy and physiology of the nervous system in recent years, though there is still enough which is obscure. Neurology deals with a system rather than with an organ; has length and breadth, touches medicine at very many points, and thus involves less risk of narrowness of view to its devotees than do some specialties. A general practitioner once shrewdly remarked to me, "It takes a mighty big man to be a specialist." The neurologist must also have large knowledge of the diagnostic and therapeutic uses of electricity.

Diseases of the skin, with its appendages, accessible as they are directly to sight and touch, form one of the earliest of modern specialties. As coming under external pathology they were formerly considered rather the province of the surgeon than of the physician. The dermatologists have simply justified their existence, and have profited to the full by the impetus which bacteriology has given to all branches of medicine.

It is only in centers of population that the specialist can get a support. In the increase of these centers lies the second factor in the etiology of specialism. Not only are cities growing in numbers and size, but the means of rapid and ready travel are so multiplying that the hope of relief from mere inconveniences, perhaps, makes people everywhere intolerant of ills which, in earlier times, they resigned themselves to bear as best they could. I have often thought what a wonderful field London offers for the development of the highest and best specialism. Quite apart from her five million inhabitants, she is within relatively short reach of any part of the United Kingdom. Besides this, people bring back from the English colonies scattered over the world many kinds of strange ailments and all manner of climatic results. There one may lay his foundation broad and deep, can keep in touch with the larger aspects of medicine, and can be gradually converted into a specialist, even of an organ, if he wish. His consulting-room is a filter for thirty odd millions of people. He can legitimately be forced into a specialty—quite a different thing from forcing himself into one. Other things being equal, the larger and wider his general experience has been, the better specialist and the bigger man will he be.

A third factor in the increase of specialism grows out of our first. Inventive talent is leading more and more to the possibility of direct examination of organs and cavities which were formerly closed to our eyes and touch. The proper use of many of these aids requires a long apprenticeship. The limits of physiologic variation must be learned, and delicacy and skill must be acquired in the use of instruments more potent for harm than good in untrained hands. Manual dexterity, impossible to some, and attainable by any only with practice, is added to general knowledge and good judgment. Ophthalmology, demanding also a wide knowledge of optics, affords a good illustration. The otologist should know much of acoustics. The nose and throat are so intimately connected with the ear, and form the starting-point of so many ear diseases, that it seems to me they

1 Philadelphia Medical Journal, Sept. 1, 1900, p. 391.

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should all be included in one specialty rather than in two, as is generally the case at present. The addition of the larynx would seem to unduly enlarge the field.

I can not see that there is now, at any rate, enough special knowledge and technical skill involved in the diagnosis and treatment of digestive disorders to warrant their separation into a true specialty. Yet a National Association of Gastro-Enterologists has, I believe, been formed in the United States. Time is inexorable and will settle the real status of the matter, so I will refrain from prophecy, bearing in mind the adage, "Don't never prophesy unless you know."

So much training is required to attain the best results with the X-rays that their use seems likely to fall largely into the hands of specialists, particularly where neither bones nor foreign bodies are in question. Y and Z rays may also be discovered, and broaden the specialty.

The three factors in the multiplication of specialties already mentioned—increase of knowledge, aggregation of population with rapid and frequent means of transit, and the invention of instruments requiring delicacy of use—may be regarded as inherent.

Besides these there are another three which I should class rather as accidental. A man may, first, have a special aptitude or taste, leading him to limit his work. This may be dangerous to indulge, or, at least, to indulge too early. The director of a modern gymnasium searches out the weak points in a would-be athlete, and, by attention to them, encourages symmetrical development. Next is a desire on the part of some to escape the hurly-burly of general practice, its irregular hours, and what they deem its slavery. This desire may be based on delicate health or indolence. The latter is no more likely to render good service to the community in a specialty than in general work. Thirdly, the hope of greater emolument with less toil may be added. People will pay larger fees for what they consider special knowledge, and the number of persons who can afford indulgences of all kinds is large and rapidly increasing. The ophthalmologist gets more for removing a speck of dust from the eye than does the general practitioner.

Specialism divides up the organs and systems of the body, separates the sexes in a measure, and still insatiate, steps in between children and parents. Shall we see parents and grandparents similarly set apart? Why not a chair in medical schools for the diseases of old age, as well as for the diseases of children? It is a conservative statement that the pathology of old age is at least as peculiar as is that of childhood. Infant-feeding alone affords scant material for a specialty, particularly if the profession as a whole would insist more on the use of nature's provision for young mammals, apparently sufficient for all of this class, save man. The number of women who can nurse their children is much larger than is that of those who do.

There are no instruments of precision or diagnostic procedures used in the diseases of children which are not in common use in adults—at least as far as I know. Of course, pathology is modified by age; but the differences seem to me minor. It is pleasanter to float on a flood than to struggle against an ebb tide. This may partly account for the apparent lack of enthusiasm for association exclusively with the diseases of the aged.

All the specialties which have been thus far mentioned are followed by men coming into continual contact with sick people, by men in active practice, so-called. The day is passing in America, and has indeed passed in the larger centers, when teachers of anatomy, physiology, and pathology can also be practitioners of medicine. These fundamental branches have become specialties, as far as teaching and research go, and an increase in the number of their followers can confidently be expected. Bacteriology is, in a broad sense, merely a department of biology. But the methods of study involved in the minute size and other attributes of the forms of life with which bacteriology deals, and the vast amount we have still to learn with regard to these organisms, affords full occupation for a large band of special workers.

Biologic chemistry, again, promises a large and productive field for a considerable number of special workers. Hygiene and experimental pharmacology also should be mentioned. The lines of cleavage between these more purely scientific specialties, just as between the practical specialties, are apparent rather than real—a matter of convenience rather than principle. Increase of knowledge will bring rearrangement of some of these specialties at the same time that it may tend to increase their number.

We practitioners can not be too grateful to the men who are willing to eat the bread of carefulness and devote their energies to the study and teaching of principles. We deal mainly with individual cases of disease. We try to cure or palliate the manifestations of disease in single cases as they come to us. Their aim is to make it possible, through determination of the causes of disease, to, in the first place, prevent them, and, in the second place, enable us to treat the disease itself when it does arise, rather than merely to treat the patient, as we still so often have to do.

Malaria and syphilis stand practically alone as diseases for which specifics have been stumbled on in the course of ages. Our recent gain in knowledge as to the causation and mode of transmission of malaria has not, as yet at least, added materially to our control of its symptoms or origin. And we are still in dense ignorance as to the real cause of syphilis. But within a few years myxedema, diphtheria, and I think it is safe to add hydrophobia, have been added to the list of diseases which we treat directly, and we seem to be on the eve of important further additions to this list.

Formerly shrewdness, "horse sense," and knowledge of human nature were more important elements in successful practice than even medical knowledge. Hence our ignorance has compelled us to treat the patient rather than the disease. And herein lies a great strength of quackery. Suggestion may be a more potent therapeutic agent in the hands of an unscrupulous and positive man, ignorant though he be, than in the hands of a highly-trained and conscientious man, handicapped often by a painful realization of his ignorance. Just in proportion to the advance in exact knowledge are the main props of quackery weakened. It is to special workers in special fields that we must look for this advance.

One is half tempted sometimes to think that the medicine of the future will be robbed of a charm which inheres in it to-day—the charm, namely, which belongs to the element of uncertainty, and the stimulation which this should bring to thought. The impulse is strong to cut the Gordian knot of abdominal diagnosis, as has been already mentioned. Fine methods of research will gradually substitute certainty for uncertainty. But diagnosis is not likely ever to become a mere penny-in-the-slot affair, and the management of the patient—the art of medicine—will ever play an important, though more and more subordinate rôle, in the drama of medicine and human suffering.

Specialization is evident in hospital as well as in private practice. The ideal hospital is a place where the

poor can have the benefit of the highest skill and attainment in every branch of medicine—a beneficent trust in which specialists are associated and harmoniously work together. It must also be a center of medical teaching and research, opportunities for which constitute the return from the inmates for the benefits received. It seems to me a question how far it is wise to encourage the establishment of special hospitals devoted exclusively to this or that age, sex, or class of disease. The isolation of the staff of a special hospital has its manifest disadvantages. The creation and support of the more minute special departments in a general hospital dependent for its maintenance on the public spirit of private persons has its patent practical inconveniences and difficulties. The general hospital must follow, not lead, in specialization, and can not afford the luxury of "fads" unless it is far richer than are the general hospitals of which I have knowledge. Although hospitals are not business enterprises, one of their sinews is money, another, the devotion and capacity of the medical staff. The same administration can, given the funds, run a general hospital formed of a congeries of special departments as well as, and at less cost than, separate administrations can run a number of special hospitals.

It is all very well to say, "Take no thought for the morrow"; if our predecessors had acted literally on this precept we should be in a bad way. Progress will march and evolution go on in spite of us, doubtless. But we can have some influence over the rapidity of evolution, and it is our business to do what we can to foster right and to discourage wrong tendencies. One fact stands out clearly—that specialism in medicine has come to stay. Its advantages infinitely outweigh its disadvantages, and we have faith that all things work for good in the long run.

We study the past, and speculate as to the future. We all sometimes feel as did the late Dr. Hagen, the great entomologist—"I should like to be my own great-grandson." We can not greatly influence the amount of pity which our great-grandsons may feel for our attainment, but we can force their respect for our honest and unremitting effort.

Original Articles.

TRAUMA AS A CAUSE OF NERVOUS DISEASES.*

CHARLES W. BURR, M.D.
NEUROLOGIST TO THE PHILADELPHIA HOSPITAL.
PHILADELPHIA.

The subject assigned to me is so large that it is impossible to give it exhaustive study in the time at our disposal. I shall speak briefly about a number of different affections, shall quote no authorities, and shall try to confine myself to matters which will lend interest to the discussion. I shall speak solely of the causative influence of trauma and of the various ways in which it acts, and shall say little or nothing concerning symptomatology. Finally, I shall omit all consideration of the diseases which result from manifest physical injury to the bony coverings of the brain and cord, such as fractures and dislocations, and shall say nothing of such well-known conditions as cerebral concussion, meningeal hemorrhage and traumatic epilepsy, and shall consider only the organic and functional diseases unaccompanied by serious external injury.

To prove the traumatic origin of a disease may be easy or difficult. It is not safe to say always that because a disease follows a trauma, therefore it is the result even though the association of the two be very frequent. It must be shown that in the nature of things the trauma is competent to produce the disease; it must be shown how it acts—by what mechanism—and, best proof of all, there must, in organic diseases, be the post-mortem evidence of an injury having been sustained. Popularly many of the acute and almost all of the chronic diseases of the spinal cord and brain are supposed to be caused by injury. Almost every patient refers his illness to some accident which occurred in the more or less remote past. It is an easy explanation and is sometimes accepted without much thought or investigation. In the text-books trauma is put down along with exposure and cold, as one of the subsidiary causes of many things. In recent years, however, the entire question has been carefully and systematically studied and though much remains in dispute some progress has been made and a few problems definitely settled. That trauma may without injury to the skull or spine produce organic disease referable to the brain or cord is now accepted by everyone competent to have an opinion. Further, certain functional nervous diseases may result from accident, and indeed from shock or fright alone without any physical injury. Finally, organic and functional symptoms are frequently associated. Whether any of the system diseases of the spinal cord are ever caused by accident alone is still in dispute. It has been frequently alleged, for example, that locomotor ataxia may result from injury. The only evidence on which this opinion is based is the more or less complete proof of the absence of syphilis and the history of an injury to the back at the time when the patient thought himself to be in good health. In truth, the determination of the causation is difficult. Syphilis precedes it more frequently than any other disease, being present in at least 80 per cent. of all cases. On the other hand, the morbid anatomy of locomotor ataxia bears no resemblance to that of spinal syphilis, and mercury and iodid of potash are of no worth in its treatment. We are forced, then, if we accept syphilis as the one great primary cause—as indeed we must—to regard it either as an indirect cause simply, as a poison which so acts on the peripheral sensory neurons as to make them more sensitive to the influence of some other direct cause, or else to assume that syphilis generates some secondary poison which in turn causes the lesions. To explain the 20 per cent. of cases in which syphilis can be excluded is difficult. To prove that trauma is a cause is not easy. Locomotor ataxia is a disease of indeterminate onset and insidious course. You can not say of any case, on such a day this man was well, on the next day ill. The patient's statement as to the time of onset is valueless, for the disease may exist for some time without causing any symptoms recognizable as such by him. It is, therefore, frequently impossible to know if, at the time of the injury, the patient was free from disease. I do not know of any case in which it has been proved by medical examination a short time before the accident that the patient was normal in all regards.

Again, what time-limits are we to set upon the active influence of a trauma? How soon or how late may symptoms caused by it first appear? May there be a quiescent interval of months or years, or must there

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be a continuous sequence of symptoms from the time of receiving the injury in order for it to be regarded properly as their cause? The answers will depend largely upon the personal equation of the observer and his mental bias. If in one case soon or immediately after an injury happening to a man in known good health there should develop the classical symptoms of locomotor ataxia, it would be proper to carefully consider whether the injury might not have been the cause. If such cases were frequent and if it were proved that injury could produce such widespread lesions as are present in this disease, then it might be accepted as a cause. But locomotor ataxia is very common, and cases with a clear history of trauma are very rare. I am compelled to believe that the causative influence of trauma is as yet unproved and must agree with Dr. Morton Prince in saying, "when a sclerosis of the posterior columns develops after a traumatism, the subject was already doomed to this condition, the process having already begun, and that the traumatism at most only accelerated the development of the symptoms and possibly of the anatomical process." The symptom ataxia may, of course, occur in many affections of the spinal cord, resulting from trauma. The arguments used concerning locomotor ataxia apply with equal force to general paralysis of the insane, except that a history of traumatism, especially to the head, is much more frequent in the latter disease. But granting this, it has not been proved that traumatism alone, acting on a man in good health, who has not had syphilis, who is not an alcoholic, whose heredity is good, and who has not been subjected to severe mental or emotional stress, can cause general paralysis. That it may be a minor causative factor, as it were the match to the powder, is surely true. Other types of mental disease, other forms of organic dementia, not infrequently result from more or less serious injury to the head, and certain insanities may occur without any external hurt at all.

The influence of trauma in causing tumors of the nervous system is only a part of the larger question in pathology, namely, the relation of trauma to new growths in general. Injury may, under certain circumstances and as concerns certain tumors, determine the seat of appearance. Injury to the head, with or without fracture, may be the direct and positive cause of a fibroma and the exciting cause of other tumors. Beyond this, for our purpose, the question is of little practical importance, for no one would base the diagnosis of tumor on the mere fact of a previous injury. Given a case of brain tumor without focal symptoms, evidence of an injury, no matter of how long standing, would be of some localizing value, but would throw no light on the nature of the growth.

The question attracting most attention to-day is how far and in what manner accidents cause certain groups of spinal and cerebral symptoms when there has been no gross visible or palpable injury to the skull or spine, or indeed no physical injury, but only fright. Erichsen was the first to study this question. He found that after accidents, especially those in which there was a large element of the horrible, there occurred in the patients groups of symptoms of certain types. Though he recognized the hysteric nature of some of them, he gathered the larger number into one class and believed them to be caused by spinal concussion. His book received considerable adverse criticism. The genuineness of the symptoms was denied and occasionally his own integrity was impeached. But time passed and it was proved that his histories were true; that such symptoms as he described do occur and are not necessarily fraudulent; that they are not the invention of evil-minded neurologists; that to carefully examine a patient, even going so far as to test his knee-jerks, will not necessarily scare him into a serious fit of illness; that the bulldozing method of treating hysteria fails, and that because a man gets well after a financial settlement does not prove he was never ill. It has also been proved that some of the symptoms which he explained by spinal concussion are produced in other ways. Recently, there has been a tendency to deny the possibility of spinal concussion on the ground that the cord is so well protected by its bony, ligamentous, and muscular coverings, so well supported by its nerves, and so surrounded by the spinal fluid that for mechanical reasons concussion can not occur. This is probably a little too radical. The evidence in favor of concussion from experimentation on lower animals is not of great value, for the results of different observers do not agree, and the anatomical or rather the mechanical differences between man and the smaller animals are so great that its existence in the latter would not prove its occurrence in the former.

On the other hand, to claim that all symptoms may be explained by gross lesions, hysteria or neurasthenia, begs the question. The matter has been somewhat clouded by a lack of exactness in defining spinal concussion. It probably would be best to define it as that condition in which after physical force has acted on the back itself, or on some part of the body which can transmit the force to the spine, there occurs a series of symptoms referable to the cord and produced without any visible injury to it, or to its membranes, or to the vertebræ, though later there may appear lesions of the cord not caused by hemorrhages, however small, but by a degeneration of the nervous elements themselves and beginning in them. There are both clinical and pathologic reasons for the belief in the existence of such an affection. Cases occur in which recovery is so rapid, the symptoms are so transient, that organic disease can not have been present. Acute cases showing exclusively spinal-cord symptoms, have been examined post-mortem with entirely negative results. In other cases, lesions have been found which have been believed by competent observers to have primarily affected the nervous elements themselves, and not to have been secondary to muscular or other gross injury.

There is no sharp line dividing spinal concussion, as here defined, from myelitis caused by multiple hemorrhages. The symptoms of the two conditions merge. At one end of the series we find a group of transitory symptoms surely caused by disturbance of the functions of the cord without organic lesion discoverable by any means at our command, at the other the complete picture of serious organic disease.

One of the most interesting and, recently, most studied traumatic affections of the spinal cord, is fairly massive hemorrhage followed often by the formation of cavities. It is most frequent in cases of fracture and dislocation, but may occur without external injury. It seems to be usually located in the cervical region, probably because of the great mobility of the neck and the poor protection of the cord in that region. The gray matter is its favorite seat, but it sometimes occurs in the white matter, and occasionally extends into a dilated central canal. The symptoms depend, of course, on the seat and extent of the hemorrhage, the character of the cavity, and the amount of myelitis, but as a rule they are characteristic. Focal spinal-cord symptoms, sudden in onset, mean hemorrhage. Symptoms of a sudden total

transverse lesion, which rapidly recede and leave only those pointing toward destruction of a small area, also mean hemorrhage. Hemorrhage often causes a Brown-Séquard palsy, sometimes simulates syringomyelia, but does not apparently ever give the complete symptomatology of that disease.

Traumatic lumbago is always placed among the nervous diseases, though in a strictly scientific classification it should be put among the diseases of muscles. It is caused always by direct injury—a blow on the back, sudden forcible bending, or a crush. Since it practically never ends in death, our knowledge of its morbid anatomy is scant. The best explanation of it is a tearing of some of the bundles of muscle-fibers, with extravasation of blood, and strain of the muscular and spinal ligaments. Sometimes there is also a real traumatic neuritis.

In recent years much attention has been given to the functional diseases resulting from trauma. The first question in my case, assuming the illness to be genuine, is whether the symptoms are caused by organic disease, or are what we must still call functional, or a combination of the two. Sometimes the answer is plain, sometimes the most skilful observer will hesitate to give a positive opinion. The grounds on which the diagnosis of functional or organic disease is based have shifted greatly. For a time, single symptoms were depended upon, and not many years ago, some surgeons claimed that the absence of muscular wasting excluded organic disease. No one makes this claim to-day, but others as groundless are sometimes heard. All the symptoms must be considered in forming an opinion.

The two great functional nervous diseases, that is, the two great diseases of unknown morbid anatomy, are hysteria and neurasthenia. Both frequently follow an accident, are much more frequent in adults than in children, and are sometimes quickly recovered from after a legal settlement is made. Both are sometimes pretended fraudulently to exist. That they may be caused by trauma is admitted by all competent to have an opinion. Concerning the manner of causation we have much to learn. It is certain that there is no lesion in hysteria discoverable by our present means. It occurs practically only after accident in which there is an element of fright, and sometimes, indeed not infrequently, there is no physical injury at all. It is curious that serious physical injury is rarely followed by hysteria, and it occurs very rarely after grave surgical operations. This is not explained by saying that severe injury insures against hysteria. The probable explanation is that there must be time enough for the patient to perceive the horror of the accident while fully conscious. Drunken men and little children almost never get traumatic hysteria, and patients go to operation reassured that no evil will result. A strong effort has been made to group together certain symptoms, some hysterical, some neurasthenic, under the title of the traumatic neurosis. It is doubtful if this serves any good purpose. Hysteria and neurasthenia, following accident, differ in no way from the same diseases when caused by other agencies.

Another disease of unknown pathology which frequently follows accidents, with or without physical injury, is paralysis agitans. Mere tremor is, as one may say, a physiologic sign of fright, and usually soon ceases, but occasionally it persists without the addition of any other symptom. Sometimes there are added, in slow progression, all the symptoms of shaking palsy. The tremor may appear first in the injured extremity if the trauma has been a local one.

TRAUMATIC NEUROSES FROM THE STANDPOINT OF A SURGEON.

ARTHUR DEAN BEVAN, M.D.

Professor of Surgical Anatomy and Associate Professor of Surgery, Rush Medical College, University of Chicago.

CHICAGO.

I feel honored by the invitation of this Section to discuss the subject of traumatic neuroses from the standpoint of a surgeon. I am very glad of the opportunity of doing this, because the subject is one in which I have been interested for some time, one which I have had unique and large opportunity of studying, and one upon which I have formed some definite opinions, opinions which are not widely known or accepted by either the general practitioner or the neurologist; opinions which I am confident will eventually be recognized, and which I consider of much practical value. The unique opportunity of studying traumatic neuroses to which I refer was the study of a train wreck in which the conditions were such that more than two hundred and fifty people were subject to the same amount of violence and the same condition capable of producing mental shock. I have already reported this wreck in detail in an article on real and alleged injuries of the spine. I shall not, however, hesitate to make free use of this material in this discussion, because this wreck furnished the rare opportunity of studying the subject in a purely scientific way, just as we would study and carry out a laboratory experiment. In fact, we could not plan out and carry out an experimental investigation of traumatic neuroses better than was accidentally accomplished by this wreck. I want to emphasize the point too that the study of this wreck was carried out, and the conclusion arrived at and submitted, in a purely scientific and non-partisan spirit.

I am not now a railroad surgeon, and have not been for years. I am not a medicolegal expert testifying for corporations. In fact, I refuse to testify in these damage cases, and do not do so except in the few cases where the law compels me to do so because of my having rendered professional services to the individual. It would be unnecessary for me to make this statement were it not for the fact that experience has shown that the salaried opinions of partisan railroad surgeons, just as the purchased opinions of neurological experts for plaintiffs, are of little scientific value and are justly discredited. It is as a student and teacher of general surgery, governed solely by a desire to learn the truth, that I investigate this subject and submit this report. My report is an indictment of the course usually pursued by the medical attendant in handling these cases. The one point which I especially desire to make clear is this: *The medical attendant, in the majority of cases, is more than any other factor responsible for the development and continuance of the condition known as traumatic neurosis.*

I say "majority of cases," because although I believe that in almost all cases the early and correct diagnosis and appropriate surroundings and treatment woud prevent the development of the condition, still there are many cases where the conditions surrounding the individual are beyond the control of the medical attendant, and a few cases where the nervous make-up of the individual is so susceptible and abnormal that the condition of traumatic neurosis will develop and continue in spite of the best environment and medical manage-

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ment. These cases, however, are rare and can not fairly be cited as argument against the position which I shall take. What do we mean by the term "traumatic neurosis"? In actual work the term is applied and misapplied to several classes of patients:

1. Conditions resulting from mental impressions made by injury or accident.

2. Cases in which there is a real injury of the nervous system following injury.

3. Errors of diagnosis such as a locomotor ataxia developing some weeks or months after an individual has sustained an injury or been in an accident.

4. Malingering.

We shall exclude at once from this discussion all but the first condition. Traumatic neuroses are abnormal conditions of the individual due to mental impressions accompanying, as a rule, slight physical injuries. This includes the two classes of cases of the authors of today, traumatic hysteria and traumatic neurasthenia. A few years ago most of these cases were classed as cases of concussion of the spine, or Erichsen's disease.

The condition, traumatic neurosis, is a mental state, not a disease with organic lesion. The mental state due directly to the injury and mental shock is transient, and under proper conditions and advice is soon recovered from, in the vast majority of cases. When the condition persists, the continuance is due to suggestions furnished by medical attendance, legal advisers, interested and sympathetic friends and relatives or auto-suggestions, with either money or sympathy in view.

For practical purposes, the cases of traumatic neuroses can be divided into two classes: 1, the medico-legal cases in which a claim for compensation exists; 2, the purely medical, in which no such element exists. As examples of the class in which the claim for damages does not influence the case I shall cite a few cases as examples.

CASE 1.—A young woman of intelligence, refinement, and wealth, was in a carriage, which collided with an electric car; she received a slight contusion of skin over the right patella. The occupants of the carriage, three women, were badly frightened by the accident, although neither the vehicle nor horses were injured. They continued a shopping trip afterward and then drove home. Upon arriving home the husband of the lady met them, was informed of the accident and was very sympathetic. Although the woman had walked on her shopping trip considerably after the acident, she now stated that she could not move the limb and her husband carried her into the house. A medical man was called. No injury to the knee could be discovered, but rest in bed was ordered. Later a surgeon was called, who advised a plaster splint; this was worn for some weeks. It was later removed, but the patient would not use the limb, although encouraged to do so. She stated that she had intense pain and that the whole limb was paralyzed. There was no swelling, and nothing abnormal to be found. Patient insisted on remaining in bed. Her general health was good, and she increased greatly in weight. This condition of affairs continued for about two years in spite of many different methods of treatment. Accidentally, it was found that when no one was about she would walk about her room without crutches. Suddenly she discarded her crutches and within a few weeks walked as well as ever, and there has been no relapse. I have seen five or six very similar hysteric knees, and cite this case as an example of a class. I feel confident that had the condition been early diagnosed, that had no plaster splint been employed, and had the medical attendants and consultants bluntly informed the patient that there was nothing wrong with the knee, that no treatment was required, that she should use the knee as usual, the condition of traumatic neurosis would not have developed.

CASE 2.—Mrs. A. B., a woman of 40, sprained her ankle. When I saw her three years later she had not walked a block without crutches. Her husband was satisfied that it was largely nervous. The injured limb was distinctly smaller than the good leg, both calf and thigh measuring more than an inch less. She complained rather bitterly of the pain and assured me that she could not walk. I told her that I would examine the foot with the X-ray. I found nothing abnormal. I gave her definite directions about walking a certain distance, and increasing this each day, and assured her that within a month she would be walking without difficulty. I advised massage and told her that within three months the limb would be as large as the other. I saw her again in about two weeks; she was walking naturally, and much to my surprise she told me that she considered the X-ray the greatest invention of the age, that it had cured her almost immediately, that she had not had a pain from the time the X-ray had been used.

CASE 3.—A woman, aged 40, about twenty years before had a lovers' quarrel, and sprained her ankle about the same time. The quarrel was not patched up and the ankle continued to trouble her. She refused to get out of bed and remained there nursing the ankle for seventeen years. She consulted many physicians. Her parents were very sympathetic and believed that she suffered greatly. One of her brothers was skeptical, and by watching her found that she walked about her room without difficulty when no one was present. At the end of seventeen years she fell into the hands of some christian scientists, who induced her to walk and for some months she walked well. Then, pleading as an excuse that she had again sprained her ankle, she took to her bed, refused to get up, and when I saw her, more than twenty years after the accident, she had been in bed for about three years after her apparent recovery from the christian science treatment.

I cite this case as a very extreme one. The history demonstrates that the individual had a peculiarly susceeptible and abnormal brain, undoubtedly a sprained ankle or a lovers' quarrel might, with an abnormal brain, be the starting-point of insanity; in this case they were the starting-point of a traumatic neurosis lasting twenty years.

CASE 4.—As an example of the great care which should be employed in preventing an error in diagnosis in these cases, I want to record a mistake which I have made.

A woman, aged 58, slipped on the sidewalk and fell, striking her right hip. She was brought to my service at the hospital two weeks later, stating that she could not use the hip and suffered great pain. She was unquestionably neurotic. I suspected fracture of the neck of femur; but measurement showed no shortening, although it was not very satisfactory, because she was very stout, was about five feet, four, and weighed over 200 pounds. I examined her under chloroform, moved the limb freely, but could find no evidence of fracture. I informed the patient's daughter that I could not find anything wrong with the limb and that I believed it was a case of traumatic neurosis and handled it as such. Later, I obtained an X-ray picture, which showed distinctly an impacted fracture of neck, with very little shortening.

CASE 5.—As a sample of how an error of diagnosis might develop a case and how many of these cases of traumatic neurosis can be nipped in the bud, let me cite a recent experience. A young woman, aged 22, while traveling from a southern state to Chicago, to attend a university, sustained an injury of her chest in a railroad accident. In the same accident several people were killed and a number badly injured. She was examined by some local physician at the time, who believed that he found that her breast bone and several ribs were broken. She was put on the train and sent to the hospital in Chicago, where she arrived forty-eight hours after the accident. My assistant examined her and believed from her history and complaints of pain that the sternum and ribs were broken. He put on the chest a tight, wide adhesive-plaster jacket. The next morning I saw the patient; she was breathing very rapidly and shallowly; she had an expression of great anxiety and suffering. I removed the adhesive plaster and examined the chest carefully. I found no fracture, lungs normal, breast normal. I ordered her to get up, and she found to her surprise that she could do so. I assured her that she was all right and would have no further trouble. Two days later she began her course in the university.

As examples of cases in which a claim for damages enters as a factor I shall cite the cases occurring in the wreck already referred to. The conditions under which this wreck occurred were the following: A long passenger train containing two hundred and fifty-six passengers, trainmen and four tramps, was crossing a trestle, twenty feet high and a half mile long, at the speed of twenty miles an hour. Suddenly the engineer blew the whistle and put on the brakes. For some reason unknown, the engine plunged through the trestle, which collapsed like a pack of cards, and let the entire train fall twenty feet. All the cars except the mail and express remained in their proper position and relation to each other. The accident occurred at 8 p.m., when every one was either standing or sitting. The result was that these people were practically all dropped twenty feet, striking on their feet or buttocks, with the additional force furnished by the sudden stoppage of the train running at twenty miles an hour. It was several hours before relief reached the wreck, but it was then systematically handled. The extent and character of the injuries in each case were noted and temporary treatment and dressing employed. The injured were then taken, part to a city hospital, and part to a country hotel.

Of the two hundred and fifty-six people in the train at the time of the accident, one hundred and twenty-three were injured; of these four were killed outright, and two subsequently died as a result of their injuries. The wreck occurred at night in a sparsely settled country, and help had to be brought from a considerable distance. All of the people were completely and thoroughly demoralized when the relief train arrived. It was necessary to carry forty of them on stretchers to the relief train. It was fifteen hours after the accident before they were all comfortably provided for. I mention these facts to show that conditions capable of producing fright and great nervous shock were present. In analyzing the nature of the injuries we found that four people had been killed by crushing injuries, the exact nature of which we could not state, as no post-mortems were made. Twenty-two people sustained fractures, six of which were compound. There was one dislocation of shoulder. There occurred eight incised and lacerated wounds, and eighteen sprains of joints, including ankle, knee, wrist and elbow. In six cases there was nervous shock without any accompanying physical injury, there were fifty-eight cases of contused injuries; two injuries of the eye; one internal injury, probably of both lungs and of abdominal viscera, which resulted fatally within fifteen hours. One hernia, one abortion, and one injury of the vertebral column and cord were reported. Later many of the cases made indefinite claims of injury to the nervous system, the specific claim being in the majority that of concussion of the spine. In twenty-four cases this claim was backed up by medical testimony.

In the settlement of these cases many cases of malingering were found, and frauds were detected in the effort to palm off an old injury or lesion as recent and produced by the accident; such as hernia, bunion, curvature of spine, or displacement of the uterus. Hair which was dyed at the time of the accident had turned suddenly white, etc. One instructive fact in connection with the accident was the ease with which the plaintiffs could obtain medical testimony in support of fraudulent and ridiculous claims.

There were but two gross injuries of the nervous system: one a temporary paralysis of the musculospiral nerve in a case of fracture of the shaft of the humerus, and in the other a gross iniury of the spinal cord; this patient died two years later from a bladder-stone operation. In both of these cases the symptoms were definite and immediate, and at once recognized.

In our discussion the interest of this wreck centers on the twenty-four alleged cases of concussion of the spine, backed up by medical testimony. A few of these cases were cases of malingering, the majority were examples of traumatic neurosis. One point I would like to make clear in regard to the medical management of the injured in this wreck is that very few cases of traumatic neurosis developed among the injured in my immediate charge, and those that did develop were entirely well in four weeks. The cases that persisted were in the hands of medical men who believed that the patients were suffering from concussion of the spine, or some other obscure but serious injury to the nervous system, and they had informed the patient and friends of this fact. These physicians were more responsible for the condition than was the accident. I am positive that, had I had each one of these cases in a private room at my hospital, and had the item of compensation out of the way, not a trace of the nerve shock would have remained at the end of a few weeks, and that all of them would have recovered their normal equilibrium. In no cases can the well-posted physician be of as much service, and in no class of cases can the ignorant physician, the partisan physician or neurologist, be of as much injury as in cases of traumatic neurosis.

The following is a very brief sketch of the twenty-four cases of traumatic neurosis developed in this wreck:

CASE 1.—A woman, aged 45; no evidences of external injury; claimed injury to back; paralysis of right upper extremity, and that her hair turned suddenly white within a few weeks after accident. Claims severe nervous exhaustion, and permanent disability. A settlement was made and recovery soon followed.

CASE 2.—A man, aged 25; no evidence of external injury; claims concussion of spine and refuses to leave room. He uses crutches, submits medical opinion that he is permanently injured; settlement was made and recovery followed.

CASE 3.—A woman, aged 28, sustained fracture of rib; claims

concussion of spine and permanent injury. She remained an invalid until settlement, and then recovered rapidly.

CASE 4.—A man, aged 40, with real injury, bruised leg; claimed concussion of spine, paralysis and permanent injury. He remained an invalid until settlement, then recovered rapidly and returned to work.

CASE 5.—This man had two ribs broken, claimed permanent injury of nervous system, remained an invalid, and sued company for $20,000. Shortly before the trial the case was settled. He recovered and almost immediately returned to his business.

CASE 6.—A man with no evidence of injury, claimed spinal concussion and permanent injury. He was suffering from rheumatism at the time of the accident, and was in search of a favorable climate to live in. He used crutches. This case was settled and the day the claimant received his check he traded his crutches at a drugstore for some toilet articles, and left the town walking without help.

CASE 7.—A woman received a bruise on the chest. She was tuberculous and suffered great nervous shock, and claimed great injury of the nervous system. Three months later she stated that she had not slept since the accident, was weak, unable to work, had had hemorrhages from lungs, due, she claimed, to the injury. A settlement was made. She improved, returned to work and died two years later of consumption.

CASE 8 and 9.—A man and his wife. The night of the wreck they stated to me that they were permanently injured. They went home, remained in bed as invalids for seven weeks with the most exaggerated symptoms of spinal trouble. A settlement was made, they left the same week for a short trip and returned entirely recovered.

CASE 10.—A commercial traveler. No evidence of external injury, but great fright, typical traumatic hysteria. He was under my immediate care. Complained of intense pain in back and paralysis of lower limbs.

At the end of a week I picked him up in my arms and put him on his feet. I told him that he was making a fool of himself, that he was simply frightened and not hurt. He cried like a child. I held him up on his feet and in ten minutes convinced him that he could walk. He left the hospital within three weeks of the accident, the day the settlement was made. After he left the hospital he consulted a neurologist, who told him that he had concussion of the spine. He was badly frightened. He wrote to me and I referred him to a physician to whom I had written my opinion of the case. This physician examined him, encouraged him to at once resume his work, which he did. I have seen this man repeatedly since, and he is most grateful for the way I handled him, although he thought it rough at the time. His description of his condition is most instructive. As he expresses it, he was so badly frightened about himself that if he had been told that he had a serious spinal injury he is convinced that he would have become a chronic invalid.

CASE 11.—A man with sprained ankle claimed permanent injury of the nervous system; remained an invalid; claimed loss of power in injured limb. A settlement was made; he recovered and returned to work after drinking up the money.

CASE 12.—A man, with sprain of ankle, claimed permanent injury of nervous system. Recovery after settlement.

CASE 13.—A man, with contusion of chest claimed fracture of sternum and spinal injury; stated that he had lost his memory; had great general weakness; inability to work, loss of eyesight, and permanent nervous injury. He remained an invalid for many months, until settlement was made, and then recovered and returned to his work.

CASE 14.—A man, with lacerated wound of nose and forehead claimed he had had fracture of the skull, concussion of spine; resulting loss of memory; impairment of eyesight, and permanent injury of the nervous system. The case came to trial. The jury gave a reasonable verdict. The money was paid; claimant recovered and resumed work.

CASE 15.—A man, with contusion and laceration of face and shoulder; claimed spinal injury and permanent invalidism. Jury gave a verdict for plaintiff. The case was settled, and man recovered and resumed work.

CASE 16.—An old lady, having great nervous shock, with stiffness and soreness after the accident, and no extended injury; claimed fracture of the spine, and submitted as evidence of such, an old spinal curvature; claimed injury of the spinal cord and permanent invalidism. Case was settled and recovery followed.

CASE 17.—A girl, aged 20, having nervous shock, with no evidence of traumatism, claimed spinal injury and permanent invalidism. She remained in bed until settlement was made. She then recovered and returned to her home.

CASE 18 and 19.—A man and his wife, with no extended signs of injury in either case. Both claimed spinal injury and permanent invalidism from the very night of the wreck. Both had had medical educations. The woman was very hysterical; the man was of more than ordinary intelligence. They wanted $30,000 each. Both became chronic invalids, most exaggerated pictures of traumatic neurosis. The woman claimed a fracture of the spine. She wore a plaster jacket for many weeks, putting it on, however, two months after the accident. The man took large doses of chloral and morphin, and within a short time looked like a physical wreck. They continued this state of thing for a year and a half. They consulted many neurologists and accumulated a vast amount of medical testimony as to their condition. About a year and a half after the accident their claims were settled out of court. Before this neither of them had done any work. They at once resumed work.

These were cases of artificial and induced invalidism. The people were intelligent and apparently honest. They were cases which were pronounced by some of our best neurologists as cases of spinal concussion, by others as traumatic neurosis. Yet there can be no question that it was in the power of an intelligent physician, and within the powers of the patients to have prevented the development of the condition, and the patients could have resumed their former occupations immediately after the accident.

CASE 20.—A young woman, with great nervous shock, but no evidence of external injury, claimed at first on the advice of her physician, a traumatic anteflexion of the uterus.

The matter was submitted to me and I informed her lawyers that the claim was absurd, and asked them to submit it to three gynecologists. This was done and the three gynecologists agreed with me. Then the claim of spinal concussion was substituted. In the trial she developed the usual picture of traumatic hysteria, and had an abundance of medical testimony to back up her claim. She received a verdict. The case was compromised, and she recovered.

CASE 21.—A man, with no evidence of external injury, traveled two hundred miles the day following the accident. When he returned home he felt sore and stiff.

His wife sent for the family physician, who told him that he had Erichsen's disease, that he must remain in bed five or six weeks and keep perfectly quiet. He was put to bed and given large doses of bromid and chloral, and external applications were made over the vertebral column. The man was ignorant, and had failed in business a short time before the accident. The confinement in bed and the medicines affected his general health, and he lost strength and weight. Three months after the accident I saw the patient. He stated that his mind was affected and that his lower limbs were partly paralyzed. I lifted him out of bed, and persuaded him to walk about the room with my assistance. I informed him that he must get up and take exercise, that he had no injury, and that if he chose he could be entirely well within a month. He looked at me and said: "My doctor tells me that I am permanently injured. You say that I am not hurt at all; whom shall I believe?" Within six months of the time of the accident the case came to

trial. The trial was hastened by his lawyers, who feared the man would die before its completion. The man was brought into court on a stretcher. Various tests were applied by experts for the plaintiff, as the dynamometer, the esthesiometer, electricity, etc. It was claimed that his spinal cord was permanently injured. He received a large verdict; this was paid. Within a few months he went to Germany, returned within a short time and resumed work, chopping cordwood.

CASE 22.—A woman, having sprained ankle, claimed gross injury to vertebral column, and permanent invalidism.

She submitted as evidence of gross lesion of vertebræ, a prominent and irregular spinous process in the lower dorsal region. This claim was not made at once and the conditions following accident eliminated the possibility of fracture of the spine. Later, the claim was made that she had beginning Pott's disease, resulting from the injury. She wore a plaster jacket for some weeks. Still later, the claim was made that she had sustained some serious injury to her pelvic organs, which had resulted in cessation of menstruation. This, however, proved to be due to pregnancy. A settlement was made, she went on to term, gave birth to her child and recovered entirely.

CASE 23.—A woman with sprained elbow, claimed permanent injury to her nervous system. Claim was settled and recovery followed.

CASE 24.—A man, with contusion of the face, claimed gross cord and brain lesion and loss of right eye.

Had organic heart lesion. The eye was examined a short time after the accident by a competent oculist, who stated that the loss of eyesight was due to a lesion of old standing. Settlement was made, and recovery, as far as the general condition was concerned, followed.

Many of the other cases talked more or less of having sustained injury of the nervous system. Each of these twenty-four cases obtained and submitted medical opinions that they had sustained permanent injury of the nervous system. The subsequent histories showed that none of them had sustained permanent injury and that they all recovered. They were all cases of traumatic neurosis, with, in some cases, exaggeration and malingering added.

One interesting fact in connection with these cases is that the actual physical injuries were either slight or entirely absent. These twenty-four cases were the only ones of traumatic neurosis developed from this wreck. The individuals who sustained severe injuries did not develop the condition of traumatic neurosis.

The conditions were most favorable for the then so-called concussion of the spine, the traumatic neurosis of to-day. Out of the 256 people, 123 were injured, and 6 people were killed or died as a direct result of their injuries. Among the many injuries sustained, there were but two of the nervous system, one of the spinal cord and one of the musculo-spiral nerve. These were at once recognized. The twenty-four cases, above detailed, were not injuries of the nervous system, but mental states due to injury and later suggestions, such as I have previously described.

I would submit the following conclusion arrived at from the clinical and medicolegal study of about two hundred cases which I have had the opportunity of studying.

1. Real injuries of the nervous system present positive and immediate symptoms.

2. Those alleged injuries of the nervous system, without positive and immediate symptoms of gross lesion are either cases of malingering or abnormal cerebral states, traumatic neuroses, or a mixture of the two.

3. Traumatic neuroses are the result of two factors: 1, a brain readily affected by suggestions; 2, suggestions furnished by an accident with or without injury to the individual, suggestions furnished by sympathetic care or a craving for sympathy, and lastly and of greatest importance, suggestions furnished by medical attendants.

4. To establish a diagnosis requires the immediate and sometimes protracted observation of the patient, as in the study of any psychosis. The supposed refined means of diagnosis, as the dynamometer, esthesiometer and electricity, are seldom of value and are often of positive harm as suggestions to the patient.

5. These cases recover rapidly under proper surroundings and advice when the continuing causes are removed. Recovery may be indefinitely postponed under improper surroundings and advice.

6. No secondary degenerations of the nervous system follow traumatic neuroses. The pathologic conditions due to an old standing traumatic neurosis are the degenerations of disuse and the general deterioration of the individual from confinement, lack of exercise, dejection, etc.

7. The subject of traumatic neuroses will not receive its proper place until the medical profesion recognize their responsibility in the development and continuance of these conditions and until proper means are provided for the punishment of malingerers and their alleged medical experts.

I add a few words in regard to treatment: After definitely establishing a diagnosis, we should handle these patients without gloves. Have a frank, honest talk with the patient alone. Tell him to throw away the crutches, to go back to work. If the general condition is bad give him a few weeks, or even months, of exercise, and possibly change of climate. Tell him that there is nothing the matter with him; that the trouble is imaginary, is in his head and not in his feet or back; that if he will believe you and make the effort he will be perfectly well in a short time. Tell him that the constipation and hemorrhoids, the headache and tired feeling are due, not to the accident, but to his voluntary confinement. Outline definite course of treatment to be followed, a cold bath in the morning and exercise at certain definite times during the day.

If you handle your patient in a perfectly frank, open way, one of two things will happen. You will either cure him at once or prevent the development of the condition, if you see him early enough, or he will go to some other physician. If the other physician is as well posted and honest as you are and gives the patient the same advice, and if all the physicians consulted by these cases handled them in the same way, we should hear very little of traumatic neuroses. I believe, as I have already stated, physicians are responsible for the existence and continuance of the majority of these cases. I desire also to make a protest against the position taken by medical men generally on the witness-stand in testifying on this subject. Not long ago, I heard the testimony of two prominent neurologists on a case which they described as traumatic hysteria. They stated that there was no lesion of the nervous system, but that there was an injury to the higher nerve-centers controlling the will, which was far more serious than a gross lesion of the brain tissue. The jury gave a verdict for $20,000, and yet it is very

evident that the man is suffering in no way from the accident. Lastly, I desire to protest against the usual method of neurologists and general practitioners of handling these cases of traumatic neuroses with gloves, diplomatically, which here means without a clear understanding between patient and physician as to the exact facts. The use of electricity and drugs, of refined means of diagnosis to discover and cure a disease which does not exist, the coaxing of the patient, are all apt to prevent a return of the patient to a normal condition.

In my own work, I have found the apparently more brutal and direct, and certainly more honest, method much more successful, and I would urge its general adoption.

MEDICOLEGAL RELATIONS OF TRAUMATIC NERVOUS AFFECTIONS.*

JAMES HENDRIE LLOYD, A.M., M.D.
Neurologist to the Philadelphia Hospital.
PHILADELPHIA.

The text for my present paper is the following case:

J. C., a colored woman, aged 53 years, in good health, without any personal history of alcoholism or syphilis, fell in the dark down a flight of stairs. She could not tell how she struck, or where she was injured, but she was immediately paralyzed in her arms, body and legs. There was no loss of consciousness. The accident occurred on April 9, 1899, and the patient was taken to a large general hospital, from which she was discharged unimproved in a few days for lack of accommodation. There was no history of her condition during these few days except that she was paralyzed as above mentioned. On April 14—five days after the accident—she was admitted into my wards at the Philadelphia Hospital.

On admission her condition was as follows:

Motion.—There was complete paralysis in all the extremities. Power was retained in the trapezius, sternocleidomastoid, and sternothyroid muscles, and in the diaphragm. The muscles of the chest were paralyzed.

Sensation.—Below a line indicated in the diagrams (Figs. 1 and 2) all modes of sensation were absolutely lost.

Reflexes.—There was a slight biceps and triceps jerk on the left side. Both knee-jerks were exaggerated. No ankle-clonus. No plantar reflex. This preservation of the knee-jerks is noteworthy.

Respiration was diaphragmatic and irregular. Inspirations were gasping, and not complete. There were no movements of the chest walls.

The bladder and rectum were paralyzed, and there was consequent incontinence of urine and feces.

Cerebum.—The mind was clear, the patient responding promptly to questions. The tongue was protruded in a straight line.

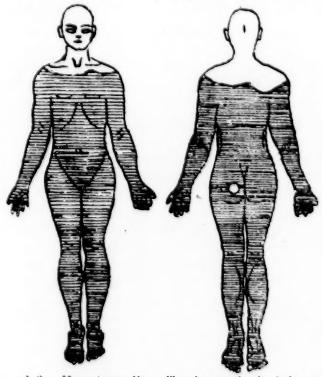
Eyes.—There was an old, probably congenital double external strabismus. It was in no wise related to the patient's condition. It has been made the subject of special study by Dr. Oliver.

There was no spinal tenderness nor deformity. There was no pain in the neck, and the movements in the neck, both active and passive, were good.

The patient's general health was good. She was a large, robust woman, without any disease of the heart, lungs, kidneys or abdominal organs[1].

With slightly fluctuating symptoms this patient lived for five days more. A slight return of sensation was noted in some limited areas, but it was only temporary and never complete. Paralysis remained absolute from the neck down. The knee-jerks were finally abolished. A bedsore formed on one buttock. The bladder and rectum continued paralyzed. Respiration became exclusively diaphragmatic. Thus, it is seen that the patient presented the picture of a total transverse lesion in the middle cervical region, with the exception of the fact that a slight return of sensation in limited areas seemed to indicate that the sensory neurons were not all completely cut off, and the further fact that the knee-jerks were not primarily abolished, as they usually are in a total transverse lesion. With such a picture presented to the eye of the clinician the diagnosis of a total transverse lesion would seem to have been justifiable. Certainly the lesion must have been an extensive one that could thus have abolished all the functions of the cord and caused the patient's death in a few days.

That the lesion was extensive the autopsy abundantly proved, but that it was extensive enough to account for all the symptoms was more difficult to demonstrate. In the diagram of the cord it will be seen that the chief lesion is a small hemorrhage invoving principally the anterior halves of the posterior columns, while the lateral tract on one side only is partially included.



Figs. 1 and 2.—Hematomyelia. Total anesthesia below the neck. Bedsore on left buttock.

The points which I wish to make in describing this case are that the amount of injury in this cord was much greater than a hasty inspection demonstrates or than the drawing shows. With a high power it was seen that the nervous tissue was the seat of edema, that nerve fibers had been compressed or even torn asunder, that minute hemorrhages were abundant and that the large ganglionic cells in the gray matter of the cord were swollen, disfigured and the seat of chromatolysis. In other words, what seemed at first glance like a very limited lesion was found on close inspection to be a most extensive destruction of the essential elements of the medullary tissue. Instead of a circumscribed hemorrhage in the posterior columns, which could not satisfactorily have explained one-half of the symptoms in this rapidly fatal case, there were extensive but microscopic changes involving practically the whole transverse area of the cord, and which explained perfectly the complete abolition of the functions of the cord.

Does such a case as this not more than support a theory? Does it not demonstrate that the abolition of function in these traumatic cases is accounted for by necrotic organic changes in the neurons and their sup-

*Presented to the Section on Nervous and Mental Diseases, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

1 This case was originally reported in full in the Journal of Nervous and Mental Diseases, February, 1900.

porting and nourishing tissues, the glia and the blood-vessels? This case, to be sure, is an extreme one, but all the more on that account it permits a panoramic view of the various degrees of injury that can be sustained by the nervous system. All this injury is not gross and "organic" in the ordinary and old sense, but much of it is minute, almost insignificant, and even quite inestimable, and yet as truly structural as is the lesion made by the stroke of an axe.

In further pursuing this subject, we may now turn briefly to some of the clinical aspects of the traumatic neuroses. These affections may be divided into two main groups—neurasthenia and hysteria. I do not propose to traverse this whole clinical field, but merely to discuss some phases of it, and those merely which have to do with the medicolegal relations of these two diseases.

First, with reference to neurasthenia, I have long felt that more precision is desirable in limiting and describing this affection. This term should not be used as a disguise for other affections, and especially for hysteria. My contention is that in those cases of profound neurasthenia, in which the symptoms are persistent, the term "functional" should be wholly abandoned and

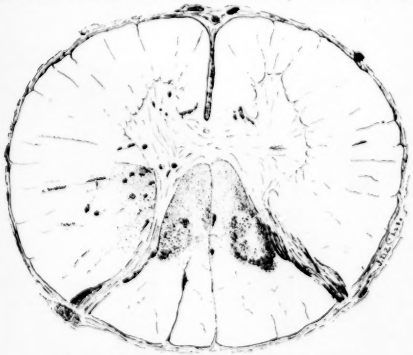


Fig. 3.—Hematomyelia. Fourth cervical segment.

the position assumed that in the light of modern researches the indications are that most if not all of these obdurate symptoms represent changes in the organic basis. We all know now, since the researches of Hodge and others, that the fatigue neuroses represent distinct changes in the neurons. We are no longer obliged to crave the indulgence of the metaphysicians while we borrow their terms to describe so-called functional effects which are without organic changes. Such distinctions should be abandoned to the schoolmen who still delight and amuse us with their claims that the brain is the "organ" of mind and not the embodiment of it. Surely, pathology, of all the sciences, should no longer be held in the trammels of these scholastic distinctions. On the witness-stand especially such distinctions are fatal. They are quite beyond the grasp of the average juryman, who is only too apt to think that if a disease is not a bodily affair, but only represents the deviations of an intangible function, it is not worth paying for in dollars and cents. I have had under my observation this last winter a middle-aged woman who received an injury and a shock in a smash-up between two trolley-cars. The injury was a punctured wound in the abdomen, which was bad enough, but the shock was far worse. This patient has practically been bedridden for six months, with a painful spine and a paretic leg, and that mental state of worry and discouragement which is worse than all, and her profitable business as a mantua-maker has been ruined. The question arises, am I obligated to describe such a condition as this as a "functional" neurosis? When I consider what I have seen in the cord which I have just described to you, I am quite prepared to contend that that painful spine, and that paretic leg, and that disordered brain, represent distinct changes in the central nervous system, which are none the less real because I have not had an opportunity of viewing them under a microscope.

With reference to hysteria, the same ground, I am convinced, may be properly held as in the case of neurasthenia. Of all the traumatic cases I suppose most men will concede that none are more common and puzzling than the cases of traumatic hysteria. That they are usually disguised in our courts under assumed names is a matter of common observation. It is believed with reason that to acknowledge to a jury that a case is one of hysteria is to give the case away. The prejudice against the term is not confined to members of the medical profession, but is widespread, especially among the more ignorant classes, from whom, as a rule, our juries are recruited. This fact has been curiously demonstrated to me by two cases in which I was engaged as an expert witness. In the first case a man, walking along the board walk here in Atlantic City on a wet evening, received an electric shock from a low-hanging arc lamp, with which the tip of his umbrella came in contact. As a result he had a typical hysteric paralysis of the arm. This limb was not only paralyzed for a year afterward, but was the seat of a blue edema, which gave it a badly damaged appearance. In this case the plaintiff's lawyer succeeded in convincing the jury that the affection was not hysteria, but that the nerves and muscles had been destroyed by the mysterious current, although it was demonstrated by the defense in open court that the nerves and muscles responded perfectly to both electric currents. In short, a verdict of $5000 was won by discrediting the diagnosis of hysteria. In the second case, a woman in Philadelphia, with an identical hysteric paralysis of her arm, caused by a blow from a falling sign, failed to obtain a verdict because apparently it was successfully shown to the jury that the affection was purely hysteria. These two cases illustrate perfectly the inconsistencies that prevail in our courts. Both cases were unjustly decided, because not decided in accordance with the facts. The man got more than his hysteria was worth, and the woman got less. Each deserved something, but justice failed to strike the average.

Why should not so-called functional disease which causes the disablement of a limb for months and even years be entitled to the same consideration as the more imposing "organic" affections? Why then should not hysteria, than which there is no more inveterate affection, be a damageable disease? I am not quite prepared to adopt the theory of the motility of the neurons, simply because it has not yet been sufficiently demonstrated. You all know, of course, what this theory is. The idea underlying it is that the neurons may display ameboid movements, and that by retracting or prolonging their dendrites and their neuro-axons with their arborizations, they may make or break contact in such ways as to cause alterations in functions. Thus, we may suppose that in a chronic hysteric paralysis the contacts

are broken, and loss of function results. The same thing may happen in the profound anesthesias. The fact that mental impressions may operate to overcome and cure these various paralyses is quite explainable on such a theory, because we may suppose that a mental impulse would be potent to re-establish the lost contact. This theory has its attractions, but it is not yet sufficiently established in the domain of science for us to advocate it, at least more than tentatively. We may fall back, however, upon one of our original propositions, i. e., that no alteration in function can occur without a corresponding alteration in structure. If this alteration merely represents an alteration in nutrition it is yet a real thing, and not a metaphysical abstraction. With such views, I have for some time held that we should group the more permanent stigmata of the grand neurosis under some such term as "organic hysteria." Such a term is consistent with what we are gradually learning about the minute alterations in the central nervous system that underlie all the so-called functional diseases. Such changes are probably as real, though they may not be so permanent, as those that are caused in a neuron by the action of a poison or a process of degeneration. As I am not one of those who believe with John Locke, that it is as easy to conceive of mind without matter as it is to conceive of matter without mind, so also I can not conceive of a purely traumatic neurosis without a change in the organic structure. Let these distinctions be for scholars and transcendentalists, but as for us, in our medicolegal work, let us hold close to our material pathology.

PROGNOSIS AND TREATMENT OF THE TRAUMATIC NEUROSES.*

WHARTON SINKLER, M.D.

PHILADELPHIA.

The most serious problem which arises in connection with disorders of the nervous system, following railroad or other accidents, is what the outcome will be. The first question asked of a physician when called in to examine a case of traumatic neurosis, either by the patient himself or the corporation by whom he is called, is, whether the patient will recover, and if so, in how long a time. The prognosis in the traumatic neuroses depends upon a number of circumstances and conditions, and first of all we must determine what is meant by the "traumatic neuroses." Different writers on this subject seem to have views somewhat at variance. Some —for example, Oppenheim and Strümpel—consider the traumatic neuroses as a separate class of nervous diseases, making a distinction between them and traumatic neurasthenia and traumatic hysteria. At the present day, however, it is generally considered that the traumatic neuroses include all of the diseases of the nervous system, either functional or organic, which result from accidents, either through actual injuries or from shock. Of course, in making a prognosis in these cases, the character of the disease, whether organic or functional, is to be taken into consideration, and above all, the length of time for which the affection has lasted. The previous health of the patient or the existence of a neurotic diathesis has much influence on the outcome of nervous disorders following injuries, and heredity should always be inquired into. It is therefore of prime importance to inquire closely into the previous health of the patient and the question of neuroses in his parents or near relatives. The surroundings and influences which are brought to bear upon the patient must also be taken into account in giving an opinion as to the question of recovery. What probably exerts as much influence as anything else on the condition of a patient suffering from traumatic neurosis is the question of litigation. In nearly all cases of injuries from railroad accidents, or those in which corporations may be held responsible, the patient at once seeks compensation for his injuries. He is encouraged in this by his friends, and by lawyers who are only too eager to work up a case. The patient becomes intensely self-centered, and all of his symptoms are dwelt upon and magnified. As long as litigation is pending, little or no improvement takes place, but on the contrary, the patient becomes more neurasthenic and hysteric. The questions of his counsel and examining physicians are liable to bring up new symptoms, and like all neurasthenics and hysterics, suggestion may develop features which had not before been thought of. It is therefore impossible to prognosticate as to the future of a patient with traumatic neurosis until damage suits are put out of the way.

The question as to whether a patient is simulating or not is a very serious one, and requires careful and thorough investigation. Most neurologists hold that simulation is rare, but that exaggeration of all of the symptoms is frequent. On the other hand, railway surgeons believe almost universally that simulation is very common, and that traumatic neurosis is, in the main, an imaginary disease. The truth, as usual, lies between the two extremes. Undoubtedly there are many cases of simulation met with, but they are not very numerous; and it is undoubtedly the case that exaggeration of all the symptoms in cases of traumatic neurosis is very common, whether there be or be not litigation in view. The opportunities for proper treatment will have much to do with the prognosis in such cases, and, after all, we may be justified in giving as hopeful a prognosis in cases of traumatic hysteria or neurasthenia, with favorable conditions for treatment, as we would in a case of the same disease where trauma had played no part, provided always that litigation and damage suits are set aside. The extent of hysteria and neurasthenia, and the length of time which the affection has lasted, must be taken into consideration. As a rule, a case of well-marked neurasthenia or hysteria, following injuries, will not get well until after two or three years of careful and thorough treatment under favorable surroundings. The prognosis in traumatic hysteria is not so hopeful as in neurasthenia, and the contractures and anesthesia may last for years. Traumatic lumbago is often persistent for years, and may leave the patient with a permanently weak back. Cold or strains may cause a return of the symptoms after a long interval of apparent health.

Treatment: It is of the first importance that treatment shall be begun as early as possible in these cases. The longer a case goes without treatment, the more difficult will be its cure, and it is as equally important to eliminate, as far as possible, the influence of litigation during the progress of the case. The effect of frequent examinations by experts and conferences with friends and counsel in regard to a damage suit, by keeping the patient harassed, aggravates the disease from which he is suffering, and creates a condition of expectancy which counteracts the results of treatment. The treatment of organic neuroses arising from trauma does not

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differ from that of the same disease not dependent on injuries. The treatment of traumatic neurasthenia and traumatic hysteria is best conducted by means of "rest treatment." Prince[1] says: "The rest cure, except so far as it secures isolation and has a mental influence, is illogical and useless, and aside from a certain class of cases, is not to be recommended." All that he has to offer, however, as better treatment, is in the line of mental therapeutics. He says that the physician should explain to his patient that his trouble is either neurasthenia or hysteria, and that he must exercise self-control and get rid of his pains, hyperesthesia and other distressful feelings by realizing that they are not real. He suggests hypnotism, the use of static electricity and hydrotherapy. On the other hand, almost all other writers on the subject are agreed that the treatment which promises the best results in these cases is the "rest treatment."

This plan of treatment is too well known to require special details. It is only well to refer to the necessity for the thorough and radical carrying out of the treatment in every particular, in order to secure a successful result. It is also essential to bear in mind that unless the question of litigation is settled in some way, or is held in abeyance, it is useless to attempt to treat the patient, either by this means or by any other. It is often the case that a patient is brought to a neurologist for treatment, either in a hospital or elsewhere, and the fact that a damage suit is contemplated is withheld until after the treatment is over. The physician is then made use of to further the ends of the patient in securing damages. The fact that he has been obliged to resort to a prolonged course of treatment is used as an argument in his behalf, and the physician's experience in the case is drawn out on the witness stand. One should always be careful to discover, if possible, whether litigation is considered by the patient before beginning treatment.

Another troublesome feature in the management of a litigation case by rest treatment is that the medical friends and family physician of the patient are insistent upon visiting him, and even when one exercises the utmost tact in refusing these visits, he is liable to give great offense. In the treatment of a case of traumatic hysteria or traumatic neurasthenia, one should insist upon rigid isolation, and on complete rest in every detail being carried out. The patient should remain in bed, and should not rise even for the calls of nature. A thoroughly competent and trustworthy nurse should be employed, and one who can offer a certain amount of entertainment and occupation to her patient without causing him to make an effort himself. The nurse should make the patient's toilet, and in some cases should even feed him. The points to be attained are, improvement in the general nutrition of the patient, the building up of flesh, improvement in the quality of the blood, and giving entire repose to the overtaxed and overstrained nervous system. The length of time which the treatment should last, of course, depends on the severity of the case, the temperament of the patient, and the duration of the disease before treatment has begun.

The rest treatment is not an infallible cure for all cases of neurasthenia and hysteria, and in those cases in which it fails, a complete change of climate and mode of life is often beneficial. The seashore agrees well with cases of neurasthenia, and great advantage may be derived from sending the patient, with a competent attendant, to a quiet resort on the seacoast, where he can have boating, sailing and an outdoor life generally, with a moderate amount of exercise. In patients who are unable to afford a thorough course of rest treatment, and often we find that this is the case, partial rest treatment may be given, with advantage in some cases, at the patient's home. It is not often, however, satisfactory, and it is much better to insist upon hospital treatment in cases where the patient can not afford the expense elsewhere.

Hydrotherapy is of great utility in traumatic hysteria and neurasthenia, either as an adjunct to the rest treatment or alone. The systematic application of douches and baths improves the general health of the patient, and is a means of improving the tone of the nervous system. Where a complete hydropathic establishment is available, the patient should always be sent there. The usual regimen consists in the patient's remaining in the hot box at a temperature of from 130 to 150 until sweating is induced, and he is then given the circular, or so-called "needle" bath for a couple of minutes at a temperature of 110, followed by a temperature of 95, for the same length of time. This is succeeded by the Scotch douche, which consists in alternating douching of the spine with a temperature of 110 and 65, at a pressure of from fifteen to twenty-five pounds. The fan douche may be used instead of the douche of full force. If a regular bath establishment is not within reach, the douches may be used at the patient's home, by having effusions of hot and cold water alternately poured down the spine, and an extemporary douche can be devised by attaching a piece of hose to the faucet of the bath-tub. The drip sheet and wet pack are advantageous in cases where insomnia is a troublesome symptom. When other means fail, it is justifiable to use hypnotism, but this procedure is of very little permanent value and is not regarded with any confidence by the vast majority of American neurologists. Even in cases where through hypnotic suggestion there is disappearance of some of the hysteric phenomena, the relief is seldom permanent. We must remember that, even in cases where the patient is susceptible to hypnotic suggestion, it does not prove the absence of organic disease

Drugs are of comparatively little value in these cases. The so-called "nervines" and "nerve tonics" are of but small value. Of course hematinics are indicated, and arsenic and strychnia in small doses help to improve the tone of the nervous system, but we must depend more upon regimen and proper feeding for the improvement in the nutrition of the body than upon drugs. The bromids are especially disadvantageous in neurasthenia and hysteria. If insomnia exists, it is better to combat this with hydrotherapy and hygienic measures than to use drugs. If one must give a hypnotic, it is best to give trional or chloralamid in small doses. Traumatic lumbago requires absolute rest in bed, with the use of massage and electricity. In severe cases, the use of the plaster jacket is sometimes necessary. The application of galvinism to the tender region of the back is serviceable, and static electricity often does good. After a sufficient period of rest, gentle gymnastic movements should be used.

[1] American System of Practical Medicine, Vol. iv, p. 467.

DISCUSSION ON PAPERS OF DRS. BURR, BEVAN, LLOYD AND SINKLER.

DR. F. X. DERCUM, Philadelphia—I expected to hear from the lips of a surgeon statements such as were made, but hardly such reckless statements. Certainly, if the most eminent medical men in the country testified in his experimental 250 odd

cases, we are justified in assuming at least a position of doubt; these men are probably neither rogues nor fools, and it becomes a serious question as to whether we are to accept Dr. Bevan's sweeping denunciation of them. That persistent symptoms follow in cases of trauma in which no element of litigation is present, we all know. Such cases are constantly being placed on record. Some of the most persistent have been non-litigation cases. I am thoroughly in accord with Dr. Lloyd's position that these cases are not functional but are really organic; that there is some intra-cellular or other change; that something is wrong with the nerve cell if it ceases to act, or with the nerve fiber if it ceases to conduct. The question is: Do these people invent the contraction or reversal of the color fields? Do they invent the stigmata of hysteria? It is absurd to suppose such a thing.

It is perfectly true that justice is not always done in the course, but it is true that an average of justice is done; and I have not such a contempt for the jury as some of my brethren have. It is just such differences of opinion as we have seen here today which make it difficult for the layman to decide what is right. I have rarely met with cases in which the damages are greatly in excess; if so, the cases are appealed, or new trials are had, and a smaller verdict given. It is the exception too that large amounts are given; more often the amount which is given is inadequate to the actual injury sustained. I am fully in accord with Dr. Sinkler's views in regard to treatment, and I can also endorse his statement that the rest treatment does not always cure these people. Some of them are hopelessly injured.

DR. DANIEL R. BROWER, Chicago—I am glad that I had the privilege of listening to Dr. Bevan's excellent paper; no matter if we differ from him in his conclusions we must admit that he has made a very careful study of his cases. The members of the Section, generally, will agree with Dr. Bevan that many cases of so-called traumatic neurosis are manufactured by lawyers and doctors, the symptoms being developed by the expectation of damages. If all physicians were as judicious in their management as the essayist, there would be but few suits for damages. There is, nevertheless, nervous disease; of a prolonged and intractable character, that is produced by trauma. The case presented by Dr. Lloyd is in point and exceedingly instructive, demonstrating that death may occur in a traumatic neurosis, with pathological lesions, that seemed to be trifling.

Dr. Bevan's interesting paper has distinctly set forth the fact, which we all recognize, that many of the cases can be cured by suggestion.

DR. SAYRE, New York—I for one must say that I do believe in the existence of traumatic neurosis, and I have seen these neuroses simulate very closely surgical lesions. I have in mind one case that received a violent fall, was supposed to have injury of the spine, was treated in one city for six months for Pott's disease, in another by means of a plaster jacket for about a year, in another with a spinal support, and in a fourth with another plaster jacket, and who presented almost a typical case of Pott's disease of the spine. One leg was very much atrophied, and the patient was hardly able to move without assistance. I watched that case for a week or so before I came to a diagnosis, and it seemed to me that it must be something besides the spine. These symptoms had all come on immediately after an injury; there was no question of litigation, as it was a runaway accident. I found that the patient had a retroflexed uterus, pressing on her sacral nerves, and on an operation being done, the atrophy of the leg disappeared, the pain on movement and the muscular contraction of her spine also disappeared. Four other men, whom you all know very well, of wide experience, had had her under observation for a period of about three years. That woman had simply a nerve irritation from pressure, and when that pressure was relieved the atrophy of the leg passed away.

I have seen another case of a woman who was working on a stamping machine that she drove with her foot, to punch button-holes or something of that sort, and she also developed a curious train of symptoms in the leg with which she was accustomed to work. A violent pain would occur in this leg and knee. Then a large blue swelling would occur, according to her statement. That knee became very tender; she said it was impossible to move it; it seemed to so much resemble inflammation of the knee-joint that one of our most prominent surgeons in New York opened that knee and, finding nothing, sewed it up again. It was concluded that she had an abscess in the head of the tibia, and it was suggested that that be explored. She would not allow this, and went to another hospital. She was referred to me by a colleague under the impression that it was a chronic inflammation of a knee-joint. I came to the conclusion that it was not an inflammation of the knee-joint, as the temperature of that knee was very much depressed below that of the other. The red bulbous swellings were also contraindication. I believe that this woman had an inflammation of the nerves of her leg, probably caused by her occupation. She was very neurotic. I put her leg at rest, I found that she had an infantile uterus; this I stretched and faradized, and kept her at rest for some months, and then gradually gave her permission to walk slowly; I toned her up and kept control over her mind at the same time. I took her out of the hospital and kept her under my personal control.

I think that there is no question at all in these cases that the personal element is very largely responsible for the rapidity with which you cure your patients. If you allow your patients any laxity they are very apt to relapse. This patient has at the present time an absolutely perfect leg and knee, although if she does too much with it she is apt to have twinges of pain.

DR. CHARLES K. MILLS, Philadelphia—This subject is too important a one not to be thoroughly discussed. Naturally the attention of the neurologists here would be directed to the statements made by Dr. Bevan, the railroad surgeon, and I think with Dr. Dercum that the statements, or at least the sweeping conclusions of his paper, should not be left to pass unchallenged. For many years I have had a very large experience in litigation cases. This experience has not been solely obtained in connection with the plaintiff; perhaps more frequently I have been employed by attorneys for the plaintiff than for the defendant, from the very nature of the case, and from the fact that most corporations have particular physicians in their employ. I have, however, somewhat frequently testified for corporations. I have even appeared in court in two cases on the same day, in one of which I was a witness for the railroad and in the other a witness for the plaintiff in a case against it. More than once I have examined cases for the claim agent of a railway at the same time that I have had cases for the plaintiff against the railway. I mention these facts merely to show that my position is not taken because of any particular prejudice or bias which has been obtained by the manner of my employment as a medical witness or medical adviser. The result of my experience is that, while in some, and perhaps many, cases exaggeration is present, and while also there are a few cases of absolute fraud and simulation, yet in the vast majority there is some genuine basis in real disease of the nervous system or some other part of the body for the claims which are made. This may not always be the disease which it is supposed to be by the physicians who are in attendance or the physicians who are called in either to assist the side of the plaintiff or the side of the defendant. It is important to study the statements made by our friend, the railroad surgeon, in the light of practical experience of this kind. His statements, as I recall them, were that there are very few cases of real injuries to the nervous system, even in accidents of so serious a nature as that to which he alludes, or at any rate in a certain percentage of the cases which he presented—not in the whole number. Above all, he made the statement, which is a serious one, that the cases were made by physicians who were called in to examine them and who were called in to testify. I think this last statement, in particular, is one which should not go unchallenged. I do not know what they do in the West in these cases, but I know the course which is followed in this part of the world. It often happens that the railroad surgeon is not competent to examine

a patient who is alleged to have, or is supposed to have, some disease of the nervous system. If he is competent he will be likely, if he is an honest man—and usually he is—to make some statement as to the real state of affairs. The railroad surgeon sometimes passes by the real symptoms which are present, or he adopts the "brutal" methods which have been recommended in the paper we are discussing. The cases are forced to a speedy settlement, and are supposed to be cured. Often they are supposed to be cured for reasons which are wholly insufficient, because, for instance, the patient gets married, or goes on with his business, or does not present any active symptoms, or at least any symptoms which would be open to an ordinary observer. In many cases I have known such patients, years after litigation was ended and settled, to still present serious symptoms.

DR. WILLIAM M. LESZYNSKY, New York—I think that every experienced neurologist will echo the sentiments of Dr. Mills and Dr. Dercum in regard to this matter. It has always seemed to me that the railroad surgeons examine these cases with the preconceived notion that all are frauds, and, consequently, the diagnosis is often erroneous and results in unnecessary confusion.

I have recently seen two patients and read the reports of the railroad surgeons, which were submitted to me by the railroad companies, in order that I might confirm or negative the official conclusions that these claimants were frauds. Both instances were perfectly clear cases of traumatic hysteria, with all of the stigmata, and many of the symptoms with which we are so familiar. If the railroad companies which employ surgeons at an annual salary would also employ a neurologist such errors in diagnosis would be avoided. The methods, recommendations and conclusions of the reader of the paper are, in general, impracticable and unscientific, and are not in consonance with accumulated neurological experience.

DR. W. T. BISHOP, Pennsylvania—My own experience as a witness in behalf of corporations is that they want you to tell the truth before and after going on the witness stand. I saw one accident in which some forty odd persons were injured, and saw every case. There was one lady who claimed to be very seriously hurt; I found that she had a very large button on her petticoat, and she imagined she had been hit in the back.

DR. A. E. STERNE, Indianapolis—It strikes me that this question can be looked at from several sides judiciously and wisely and with perfect honesty. I am much of the mind of Dr. Brower when he says that the way things are done in the East is very different from the Middle West. I believe that a large part of the conditions that arise in these patients are bred and born of circumstances. It depends very often on the surroundings, and largely on the locality in which a person lives as to whether or not he will put his case in legal hands or whether he has any choice in this matter whatever. I know that in all parts of Indiana there are lawyers in every town, and several firms of lawyers in the city of Indianapolis, who make it a point the moment they hear of an accident to investigate it and step in and take charge of the case if possible. Those men study up these questions, usually not with the acumen of a neurologist, and usually a neurologist can trip these men up, but ordinarily they instill into these claimants for damages a certain amount of ability to do and say things as they would be done and said by patients with these injuries. As far as I am personally concerned, I try to keep out of every damage suit, whether it is for a corporation or a private individual. Further, there are a great many of these cases in individuals who are undoubtedly injured, and permanently injured. Neurasthenia, whether we meet it simply or traumatically, is certainly a loss of power of the nerve cells. Fright causes conditions outside of accident; why not then in accident? Every year the question of expert medical testimony comes up in almost every society, and we very seldom come to any definite conclusions; in fact, we can not well do so inasmuch as the law allows so much latitude in such matters. Under all circumstances this question must be very carefully handled. It would certainly be a gross error to declare that every damage case for injuries received is fraudulent, or even suspicious, but it is just as well to bear in mind the apparent necessity which compels a claimant to remain invalidized as long as litigation is in progress.

DR. DAVID I. WOLFSTEIN, Cincinnati—From the tone of some of the arguments made here one might think there was doubt as to the existence of the condition known as traumatic neurosis. I certainly thought, notwithstanding the rather brisk argument of the surgeon, that traumatic neurosis was an accepted and well-defined state. Even after the surgeons have eliminated malingering, and the ills born of pending or intended damage suits, there are certainly many cases which are deserving of the name and which I fancy would defy most obstinately the essayist's methods.

I should very much like to have heard brought out in the discussion more exact information as to classification. Shall we differentiate between traumatic neurosis and traumatic hysteria? Shall we reserve the term neurosis for those cases which do not present any hysterical stigmata? Furthermore, it seems wise to me to limit the term "traumatic neurosis" to such cases as do not present palpable and visible lesions, at least of grosser nature. For this reason, with the greatest respect for Dr. Lloyd's remarks, I do not think a case such as he quoted should be made to bear upon this subject. I doubt if a case so acute, so rapidly fatal and with such grave symptoms, presenting what seems to me to have been small hemorrhagic foci, is properly a case of traumatic neurosis. I think traumatic acute myelitis would probably better apply.

Of course, we must continue to believe that every pathologic condition has underlying it a corresponding anatomic, or molecular alteration of tissue, in the nervous system, as elsewhere. However, I fear we are accentuating too enthusiastically the advantages of the Nissl, and even the Marchi, method in diseases of this order.

DR. RICHARD DEWEY, Wauwatosa, Wis.—I regret that Dr. Bevan did not remain to hear the discussion of the paper, and to sum up in answer to the objections raised. The paper is one which I heard him read several years ago before the Medicolegal Society of Chicago, and it seems to me desirable that the secretary of the Section be invited to request him to bring his paper down to date and to report at the meeting of this Section next year, giving any further light that may be possible on the cases which are reported as they stood several years ago. The remarkable fact of all the patients recovering that were under his care, and none of those, or apparently very few of those that were not, would make it seem that there was something fallacious in that. It is possible that the patients, as has been mentioned here, who apparently were well, might have many symptoms remaining of the neurosis from which they suffered, and that the apparent recovery was not merely the result of their being under the care of a particular physician.

DR. WATSON—I want to speak of the possibility of injuries being very slight, so far as external appearances are concerned, and yet develop very serious nervous disturbances, extending over years. I recall to mind a case of railroad injury, some eight or nine years ago, where there seemed to be but very slight injury, with recovery in three weeks' time, but after about five years she exhibited symptoms which were only referable to the accident; until she came under my treatment she was a hopeless invalid.

DR. NATHAN HERMAN, Baltimore—I notice that there is a tendency in this interesting discussion, the whole of which I unfortunately did not have a chance to hear, to make a distinction between psychoses and neuroses, between functional and organic derangements. I am one of those who believe that there is no functional derangement without an organic basis, and although, as in other diseases, the extent of the organic lesion may not comport with the functional disturbance, or vice versa, still I believe there is always some organic disturbance as the basis of the trouble. If this is difficult to find post-mortem, as we know it is, how much more difficult ought we expect its discovery to be ante-mortem.

I will cite a case of mine which will at least serve to illustrate the reality of the disease. It is the case of a youth of 20 years of age, who, in consequence of a slight accident in connection with a cable car, developed a marked tremor, or rather jactation, of the right leg. He went the rounds of hospitals in various cities, becoming, with some remissions, on the whole gradually worse, and finally landed at the Hebrew Hospital, of Baltimore. When he came under my treatment his condition resembled very much that of paralysis agitans, and I so called it in a paper presented before the Medical and Chirurgical Faculty of Maryland. There was no possible reason why this youth should malinger. The case was finally cured by hypnotism, all other means having failed. It might be contended that the fact of the cure being effected by psychical means would prove the purely psychical nature of the case, but, on reflection, it appears not more unlikely that a pathological condition with an anatomical basis should be benefited by the exercise of psychic function than that a similar state of affairs in the so-called physical realm should be benefited by means of the exercise of physical functions, which, indeed, is a common occurrence. The success of the psychical treatment, therefore, by no means justifies the condition that a lesion did not exist.

DR. G. W. MCCASKEY, Fort Wayne, Ind.—It seems to me that there must necessarily be some sort of anatomic basis for the chronic functional disturbances of neurasthenia, although there are some things which appear very difficult to explain in harmony with this theory, among which may be mentioned the sudden development of symptoms in some cases. These anatomic changes are not, of course, supposed to be of a gross character, but relate to the intracellular structure of the protoplasm. Such changes may be the result of either excessive fatigue, autointoxication or traumatism, as in the cases of traumatic neurasthenia, the existence of which was pointed out long ago by Charcot. There are many elements in these cases connected with railroad injuries, the psychical ones being quite important, and I can fully corroborate the statement made that these cases, especially when concerned in litigation, practically always exaggerate their symptoms. Sometimes this is done consciously and at other times unconsciously, but always to the great detriment of the plaintiff in the eyes of the expert, the jury and the court.

DR. BARKER—It must be remembered that in all large railroad accidents there is a certain percentage of those who go on their journey and make no claim for damages, and yet who are injured seriously by shock.

DR. C. C. HERMAN, Pittsburg—One feature of these cases is that when a physician gets on the stand to testify he is put upon self-defense, as each lawyer is trying to obtain such answers from him as will strengthen his side of the case—questions of a double meaning, unanswerable until rearranged and answered separately. I think the author unnecessarily severe in some of his statements; also he seems to have little faith in either the ability or honesty of the neurologist. I have often seen faith limited by the meager knowledge of the subject. I am willing to endorse the essayist as a surgeon on the merits of his paper, but not as a neurologist.

THE CHAIRMAN—I believe that some misapprehension has arisen as regards Dr. Bevan's stand on this subject. I happen to know Dr. Bevan very well, have talked with him about the affections under consideration, and am sure he does not at all believe that these patients with traumatic neuroses or psychoses are simply simulators, exaggerators, liars and plunderers of the railroad systems. I regret that he could not remain to explain his position, but I think he did not make any statement approximating that idea in his paper. What he particularly meant was that if taken promptly after the accident, and then handled properly, the old chronic cases of traumatic neurosis, which he recognizes as a disease, would be obviated. I believe that that is a fair statement of Dr. Bevan's position as regards that particular point.

DR. CHARLES W. BURR, Philadelphia—It seems to me that a very large part of the discussion this afternoon has been used in breaking down an already open door. Certainly no one doubts the existence of traumatic hysteria. I do not know what Dr. Bevan meant to say, but certainly the whole implication of his article was that practically hysteria was another name for fraud. That was the moral most of us drew from his paper. Of course, men may pretend to have hysteria, as men pretend to have broken legs, but the reality of the existence of the disease is beyond question.

I was in hopes that something would be said on the other side of the functional question. Most of the speakers have assumed that hysteria has an anatomic basis. There is no known anatomic basis for hysteria. If by organic disease we mean a disease that, either to the naked eye or to the microscope, will show some change in which we can say, from the state of the organs in death, without any prior history, that the patient had that or the other disease, then we must say that hysteria is not an organic disease. The most careful study will not enable any man to say post-mortem that this was a case of hysteria. So long as that is true, we are bound to say that hysteria is a functional disease.

As to prognosis, I have had one case which lasted for twelve years, although it was settled three months after the accident. The patient is now a classical picture of hysteria, and will probably so continue until death. As to the possibility of disease, at first functional, becoming organic, a year ago I made an autopsy on a woman who had been an inmate of the Philadelphia Home for Incurables for fifteen years. She was sent there fifteen years ago with a diagnosis of chronic incurable hysteria. She was paraplegic, anesthetic, and had some special sense symptoms. Many very good physicians had examined her during the years of her illness, and all agreed that she had hysteria. I watched her three months out of every year for ten years. She did not change at all. Last year she died of Bright's disease, and post-mortem there was a diffuse myelitis of the spinal cord. Did that woman start out with a functional disease thirty years ago and finally end up with the organic disease, or was the disease originally organic? Of course, I agree entirely with Dr. Sinkler as to treatment.

DR. WHARTON SINKLER—In regard to the matter of bulldozing sick people, the fact that a person may be made by strenuous effort and insistence to get up and go about does not prove that he has no organic disease. It is a well known fact that a person having an organic disease, like a brain tumor or a myelitis, may, through hypnotic suggestion, be brought to do certain things. The fact that this has been done by the method which Dr. Bevan has suggested does not prove that his cases were simply imaginary.

PHYSICIANS AS SPEAKERS.

WILLIAM WHITFORD.

OFFICIAL STENOGRAPHER, AMERICAN MEDICAL ASSOCIATION.

CHICAGO.

Introductory Remarks.—The communication of thoughts by means of spoken language is an art that can not be acquired to any great degree of perfection except by long and continued practice. Some physicians are more highly gifted than others with facility of expression, and they are naturally endowed with the power of eloquence; but to none is it at all times an easy process to embody, in exact and appropriate language, the various trains of ideas that are passing through the mind. However distinct may be a physician's voice, however vivid his conceptions, he is often conscious that the phraseology at his command, particularly in public speaking, is inadequate to do them justice. He seeks in vain the words he needs, and strives ineffectually to devise forms of expression which shall faithfully portray his thoughts. He employs words and phrases either too general or too limited, too strong or too feeble, which suit neither the occasion nor the subject-matter.

It has been said that physicians seldom appear to advantage in public speaking. They are often sum-

moned to testify in courts of justice, where their resources of expression may be taxed for hours. They are frequently placed on boards of education, on committees dealing with sanitary conditions, and on the common councils of cities. In meetings of citizens they are asked for their views on propositions affecting the public health, and, if successful in their professional careers, may be associated with the faculties of medical colleges. They are also members of city, county, state and national medical associations, where debate is had on papers read and questions relating to the rights, privileges, or standing of the profession, or regulations for the management of the organizations. Yet for such positions many, otherwise qualified, are unsuited because they have neglected the study and practice of free expression. Some distinguished members of the medical profession have deplored this lack and have urged upon medical students the importance of attending to the subject.

Voice and Pitch.—The pitch, intensity, and amplitude of a speaker's voice have much to do with the work of the reporter, in that they will greatly expedite his work or render it extremely difficult. A physician, in addressing a convention in a large hall, may pitch his voice so low that perhaps only one-half of the members can hear distinctly what he says, and it is largely guesswork for the other half to grasp his meaning. If a reporter be reporting the proceedings of a large association, as, for instance, the American Medical Association, and the members rise and speak from various parts of the hall, the pitch of their voice will play an important rôle for good or bad. The acoustics of a hall may be perfect, but if a physician's voice is improperly pitched, he will be imperfectly heard; and, in such instances, incorrectly reported. It is an irksome task for any reporter, no matter how acute his hearing may be, to report a physician who has a low-pitched, thick voice, coupled with a mumbling mode of utterance. On the other hand, the physician who takes cognizance of acoustics and pitches his voice in a much higher key, if he articulates well, can be heard in the remotest nook or corner of a large convention hall without apparently any unusual effort. A low-pitched voice, combined with rapidity and indistinctness of utterance, will worry most reporters. A physician with a tolerably high-pitched voice may be clear and distinct in utterance, yet excessively rapid in delivery. His clear-cut sentences may flow uninterruptedly at the rate of between 160 and 190 words per minute. Such a man can be reported with comparative ease by an efficient hand. Reporters sometimes have to report physicians with imperfectly attuned voices, who speak in a go-as-you-please fashion. Their sentences are diffuse, involved, and deficient in precision. The one who tries the mettle of the reporter is the quiet, easy, fluent speaker, who speaks just loudly enough to make himself distinctly heard, and pursues the even tenor of his way without a pause, without emphasis, without anything that can check the rapidity of his utterance.

It is a pleasure to report the masters of language, of tone and gesture, who possess voices remarkable for their volume and range and their capacity to express every shade of feeling and of passion of the human soul. Deep in tone, and perhaps melodious, such voices are magical in their power of controlling the feelings of those who listen to their varying cadences and exquisite modulations. The Rev. Joseph Parker said that the late Mr. Gladstone had "a rich, round, deep, expansive, melodious, grand voice." The voice of Henry Clay, we are told, had "an indescribable charm. It could ring out in trumpet tones, or it could plead in low, plaintive notes, which pierced and thrilled the hearer." The voice of Daniel Webster was "deep, rich, musical, flexible, and of prodigious volume and force." Mr. Lecky, in writing of O'Connell, says: "With an easy and melodious swell, his voice filled the largest building and triumphed over the wildest tumult, while, at the same time, it conveyed every inflection of feeling with the most delicate flexibility." On the other hand, Thomas Jefferson failed as a speaker simply for lack of voice. His voice became guttural and inarticulate in moments of great excitement, and the consciousness of this infirmity prevented him from risking his reputation in debate.

Wendell Phillips advised, for public speakers, a sustained conversational tone, a little elevated above the ordinary, with an effort at distinct enunciation. He advised, too, vernacular speech, even colloquial in tone.

A clear, distinct, far-reaching voice is undoubtedly a natural gift, although physicians, as speakers, can do much by training to acquire an agreeable tone. In reporting loud, excitable, inflammable speakers, I have met with difficulty at times in catching the exact words, owing to deficient enunciation or muffled syllables. Occasionally a great speech is delivered which seems to preserve in print some of the chief elements of its power; but in the vast majority of instances it is but the worthless remains which the most expert reporter can give of that which, in its utterance, so charmed or electrified the audience. Bright, Gladstone, Phillips, Clay, and other great orators understood the secret of how to pitch the voice so as to make it audible to everybody in a large hall. If the acoustic properties of a hall are good, the voice pitched in the right key will carry; if those properties are bad, the shouted words will be heard no better than if they were whispered.

As the possessor of a good, clear, penetrating voice, I may mention Dr. Dudley S. Reynolds, of Louisville, Ky., who usually takes a conspicuous part in the proceedings of the general sessions of the American Medical Association. A more powerful, rotund, far-reaching voice is rarely possessed by any public speaker. It is an organ-toned basso of unusual range and carrying power. Whenever Dr. Reynolds utters the words, "Mr. President!" in true oratorical style, in a general meeting of the Association, it is the signal for craning of necks and upturned faces. He commands attention at once. The same may be said of Dr. W. T. Bishop, of Harrisburg, Pa., who has a naso-metallic voice of wonderful carrying power. He likewise takes an active part in the general meetings of the Association, and whenever he rises to speak and the President asks him to announce his name and state, he exclaims, "Bishop, of Pennsylvania," with a trumpet ring of the voice that can be heard in the remotest nook of a large assembly hall.

The voice and manner of some speakers make those listening restless, weary and uncomfortable, even when the subject-matter of the address was valuable and of interest, the speakers themselves being usually entirely unconscious that the effect produced was so contrary to their aim. Doubtless, too, nearly all have at some time been made sensible how much of soul-stirring power may be communicated by the tones of the human voice alone, whether employed in speech or song, and I can appeal to the experience of many to witness that it is not so much in the words, however intense their

meaning, as in the tones which convey them, that the soul's utterings are clearly recognized. The possibilities and results of a good voice can not be fairly estimated; they are too far-reaching; and it requires but little thought on the subject to realize that the direct benefits accruing to the possessor of a clear, well modulated voice are incalculable. The conversion of a poor, unpleasant voice to one of rich and musical quality discovers to its owner the energy of unsuspected forces.

The disadvantage of a weak voice or of speaking habitually in a feeble manner is the not being heard at all, or with difficulty. But a more subtle and pernicious consequence is that it reacts unfavorably upon the mode of thought and expression. While speaking too low is a fatal impediment, it is detrimental to speak too loud, for the reason that the ear is pained, the attention distracted, emphasis defective or excessive, the nerves of the hearers irritated, and if the voice be in any degree strained, it will be neither sweet, soft, nor agreeable. The consonants should be articulated distinctly, but not to the neglect of the vowels, in which inhere all the best qualities of the voice as well as its carrying power.

It is said that a medium pitch should be the basis of speech. From it one may rise or fall, according to intellectual and emotional requirements. Height and depth are necessary. Beecher said, "What a speaker most needs is to strengthen his ordinary conversational voice, without giving it a hard, firm quality; that is, without destroying its flexibility and power of adaptation to every mood." It is a fine art to be able to lower one's pitch. Some scream on to the end during an animated discussion from sheer exhaustion; others spasmodically fall to a low note, but immediately forget themselves and run up to the same pitch, vociferating until out of breath.

The acoustic properties of most auditoriums or convention halls are imperfect. But these defects generally have a physical cause which admits of being guarded against by the adaptation of the speaker's position and tone. Monotony of a low-pitched voice exerts a soporific influence over an audience, which no strength of thought nor beauty of language can wholly counteract; and if there be regularly recurring minor notes, the most startling expressions lose their power. Even to those who do not sleep the sounds bear no sense. The prime object of a speaker should be to make himself understood, and to this end sense should never be sacrificed to sound. A speaker should never use more force than necessary. If requested to speak louder, he should beware of raising the pitch of his voice; by a slight increase of volume on the same key he can make anyone, whose organs of hearing are not defective, hear distinctly. The groundwork of good speaking is the tone of lively conversation.

Vivacity is not force, yet many speakers, to evoke interest, use more force, when the only means of gaining what they seek is increasing animation. Dr. Henry Mandeville gives a distinction of supreme moment between force and vivacity. He says: "We should be careful not to confound force with vivacity. Force is strength, energy; vivacity is life, animation. Force has respect to the hearer, vivacity to the subject. . . . Force, to the verge of vociferation, especially if uniform, may be associated with dullness; vivacity never; and yet there may be great vivacity in speakers who have little force. . . . Force is under the control of the will, and is measured and regulated by the judgment; vivacity depends upon the feelings and their susceptibility of excitement from the progress of discussion. The one is therefore voluntary; the other involuntary. A speaker can command force at any time; but vivacity, if it comes at all, comes without being summoned or solicited. It appears only when the speaker begins to be interested in his subject; and as this penetrates and warms and absorbs him it grows apace independently both of judgment and volition."

The late Mr. Thomas Allen Reed, an eminent English reporter, says: "I have heard speakers laboring hard to make themselves clearly heard by a large audience, but to very little purpose; they have been speaking in their ordinary tone of voice, and straining every nerve after a distinct utterance; but their pitch has been too low. A very little elevation would have made them more audible with much less exertion. I have known speakers with extremely weak voices make themselves well heard in large rooms by simply attending to pitch and clear articulation." A loud voice may be a very indistinct one, sometimes indistinct because of the loudness. The essence of distinctness is a clear, crisp articulation. With some speakers the vowels absolutely drown the consonants, which have thus no opportunity of asserting themselves, and the result is that the hearers have but a vague conception of the words that are uttered. Audibility is not dependent on volume of sound. Many speakers are unintelligible because of loudness of voice. A peculiar effect is often produced after the first few minutes by the very loud speaker, especially if in a monotone. The auditors are delighted to hear his strong, melodious voice, but after listening for a while they become conscious of difficulty, and before he closes have lost interest. The impact upon the tympanum and upon the finer fibers within has dulled sensibility. Some speakers employ but two tones, one a low pitch, and the other a piercing shriek, which they alternate with uniformity now and again, with no regard of sense or length of the intervals. Others allow the voice to fall at the end of sentences, and occasionally on emphatic words. Those who attain high success as speakers must be heard agreeably, and, if possible, their voices should be musical. Under no circumstances should the speaker be content to allow his voice to remain rough, harsh, or grating. Many extemporizers have but one style of delivery. Their tones are the same whether they deliver a business statement, a presentation speech, a congratulatory address at a golden wedding, a witty after-dinner response, or a patriotic oration.

Suggestions for Speakers.—No pains, nor toil, nor time should be spared in careful preparation, in making descriptions of cases graphic and forcible, statements lucid, appeals pathetic, in filling the subject with what will both strike and stick. It is necessary that a doctor shall have a clear conception of his subject in order to instruct and convince. Vivid conception generates power. Let the divisions of subjects be clear and logical. These should be simple, natural, progressive, and thoroughly mastered. If possible, the physician should have facts, points, arguments and illustrations at his tongue's end. There is power in illustration. Let the illustrations be from recent occurrences.

Delivery.—The first duty of a physician in addressing an audience is to make himself heard. If he speaks very rapidly, his hearers will miss words here and there, and he fails to produce the effect intended. He should be full of his subject and impressed with its importance. He should speak deliberately, enunciate distinctly, and in a natural voice. He should express his thoughts with clearness and force. His peroration

should be a sharp, clear summary of established propositions, forced home, perhaps, by an impressive illustration. One of the cardinal virtues of good speaking, therefore, is distinctness of utterance. A speaker may be slow and deliberate, may express himself in exceptional English, and be in all other respects easy to report; but if he has not acquired the art of making himself heard, much of what he says loses its effect.

The real secret of effective delivery lies in the ability of a speaker to impress himself with his subject. He for the time becomes the standard by which all thought and feeling and sentiment of a whole assembly are measured; nor can he hope to produce in his hearers an interest greater than his own. A good speaker, as his mind becomes inflamed with unwonted activity, rises to a plane of thought and feeling of which he himself is altogether incapable in his calmer moments. His conception is sharpened and his thoughts come with a clearness and precision that leave no time for hesitation. The mind, as it were, becomes intoxicated with its own ideas. The perception of the hearer is correspondingly quickened, and the audience, catching the inspiration of the speaker, unconsciously rises with him if animated by the same spirit. Speaker and hearer have become thoroughly *en rapport*, and it may be truly said of a great assembly, "a thousand souls with but a single thought, a thousand hearts that beat as one." Ability to become deeply impressed with the subject under consideration, the power to rise to a sublime conception of it in delivery, and the faculty in a speaker of transmitting his own inspiration to his hearers is the real basis of good, effective speaking. While all physicians can never hope to attain a high type of oratory, still some may be greatly benefited by a better understanding of the principles that underlie good speaking.

One of the facts disclosed by reporting physicians for the last sixteen years is the marked tendency toward greater simplicity of expression. Involved sentences and the use of big words to say little things are not tolerated as they once were. Conciseness and condensation, as elements of style, have largely taken the place of classicism. It is not so much stateliness as incisiveness that is sought. The axiom of the modern speaker appears to be that to talk effectively one must speak tersely. The most pleasing and impressive speakers are those who understand word-history best, and who are most skilled in the nicer refinements of our vocabulary. To feel the force of all there is in their speeches we must partake of the same kind of knowledge, and hence derive the same discriminating instinct.

Diffuseness.—A common error among young physicians, in discussing papers read before medical societies, is a tendency to diffuseness, which may be defined as a copious use of words so arranged as to create the suspicion that a thought is somewhere concealed among them. The youthful physician, and, we regret to say, some of the older members of the profession, in debate, feel it necessary to describe ordinary things in an extraordinary way, and strive to dignify commonplace thoughts by clothing them in fulsome rhetoric. The result is a painful incongruity between the thoughts and their apparel. For instance, a young physician instead of saying that a man was thrown sideways from his carriage, breaking his leg and putting his ankle out of joint, said that "the patient was projected transversely from his vehicle, fracturing the tibia and fibula and luxating the tibiotarsal articulation."[1] Again, another speaker, instead of saying that he had found a large cancer of the liver at a post-mortem examination, said that he had found "a colossal carcinomatous degeneration of the hepatic mechanism." The effect of the use of such large words is usually heightened by an overwrought, stilted delivery as unnatural as it is unnecessary. These faults can be corrected by time and experience. Simplicity is really the thing to be sought. In this connection we are reminded of an excellent story which is told of Dr. Skinner,[2] an eminent theologian. He was unable to use simple words in either preaching or lecturing. One Sunday he was asked to address the Sunday-School class, and consented to do so. He began his address in this wise: "The Westminster Catechism is an admirable syllabus of Christian doctrine." As soon as he had uttered those words, the superintendent intimated that the children could not understand him, whereupon he said: "Your superintendent informs me that you do not understand what I say. Let me explain: Syllabus, my dear children, is synonymous with synopsis."

Rate of Speaking.—The average rate of public speaking is put down in most shorthand text-books at 120 words per minute. This average is too high for the medical profession, whose members deal largely in technical terms. The rate of speaking of some of the greatest orators varies from 100 to 130 words per minute. It is said that John Bright and Gladstone, in beginning their speeches, rarely exceeded 85 words per minute, but as soon as they became interested and deeply absorbed in the subject in hand, their rate of speaking ranged all the way from 85 to 130 words per minute, and during flights of oratory they would reach 150 words per minute for a short time. Bryan, the Democratic candidate for President, in delivering an address to a large audience in this city not long since, spoke so slowly that his speech was taken verbatim by an expert typewriter operator. He did not exceed 82 words per minute. The late Colonel Ingersoll, one of America's greatest orators, spoke at the rate of 130 words per minute, and could keep it up for hours without, apparently, any strain on his voice, which was that of a sustained, animated conversational tone. My estimate of his rate of speaking is based on a lecture which I reported for a local newspaper several years ago. At that time the Colonel spoke for two hours and forty minutes. One of the most rapid speakers in the medical profession I have ever reported was the late Charles T. Parkes, professor of surgery in Rush Medical College. I reported twelve didactic lectures for him on "Fractures and Dislocations." These lectures were delivered without notes. His average rate, during a fifty-minute lecture, was 175 words per minute. Parkes belonged to the jerky, spasmodic type of speakers. Words fell from his lips in volleys, and each volley was usually preceded by a short grunt.

I append a partial tabulated statement, giving the rates of speaking of those physicians whose discussions and lectures I have repeatedly reported from time to time:

Speaker.	Rate of speaking.
Joseph M. Mathews	110 words per minute.
George Ben Johnston	110 " " "
William E. Quine	115-130 " " "
D. R. Brower	115 " " "
F. W. McRae	115 " " "
Robert T. Morris	120 " " "
W. E. B. Davis	120 " " "

1 Edmund Andrews: Introductory Address, JOURNAL, Vol. XXV, Nov. 2, 1895.

2 James M. Buckley: Extemporaneous Oratory.

Speaker.	Rate of Speaking.
W. W. Keen	125 words per minute.
Rudolph Matas	130 " " "
Charles A. L. Reed	130 " " "
Arthur D. Bevan	130 " " "
T. J. Happel	135 " " "
D. A. K. Steele	135 " " "
Richard Douglas	140 " " "
Nicholas Senn	140 " " "
J. Henry Carstens	140 " " "
Howard A. Kelly	140 " " "
Henry M. Lyman	145 " " "
James F. Baldwin	150 " " "
J. B. Murphy	150 " " "
A. M. Cartledge	160 " " "

Only a rough estimate can be given of the speed of any speaker, for the reason that his rate of utterance varies with the nature of the subject, his familiarity with it, etc. Senn, Carstens, Quine, Bevan, Kelly, Keen, and many others vary their rate of speaking very materially, particularly when familiar with the subject under discussion, and pressed for time.

Logorrhea.—Washington Irving says: "Redundancy of language is never found with deep reflection. Verbiage may indicate observation, but not thinking. He who thinks much says but little in proportion to his thoughts. He selects that language which will convey his ideas in the most explicit and direct manner. He tries to compress as much thought as possible into a few words. On the contrary, the man who talks everlastingly and promiscuously, who seems to have an exhaustless magazine of sound, crowds so many words into his thoughts that he always obscures, and very frequently conceals, them.

The free and unrestrained use of words leads to volubility, profuseness and increased rapidity of speech, and increased rapidity of speach leads to inaccuracy of expression, which sometimes renders the efforts of a speaker worthless and unavailing. The reporter in such cases is the protective shield of the speaker, and everything spoken by such men should go through a kind of reportorial refinery before it is published. A lawyer, for instance, has a good case, and has it well prepared. On the trial he examines his witnesses with a string of questions so involved, complicated and illy expressed, and the ideas sought to be conveyed to the jury are so deeply buried and hidden beneath a mountain of needless words, as to bewilder and confuse, and then he wonders why he lost his case. No one is better situated to note the disastrous effects of the inapt and ineffective use of words than the reporter. Pope expressed the matter in a few words when he said:

> Words are like leaves, and where they most abound,
> Much fruit of sense beneath is rarely found.

Long sentences are fatal to clearness and force, however well constructed they may be, and should be studiously avoided.

Precision.—Precision is also of the utmost importance, and can only be attained by a nice discrimination in the use of words. Such words should be chosen as shall express the exact shade and quality of meaning required by the context.

Ambiguity.—Ambiguity is another foe to clearness. The arrangement, as well as the language, should be such that we not only may, but that we *must*, be understood. The first principle of strong oral composition demands the employment of as few words as will clearly express the thought. This rule, carefully followed, will eliminate redundancy, circumlocution, and all kindred evils that weaken the style of many otherwise good speakers.

Analysis and Plan of Delivery.—Much depends upon the analysis of the subject and the plan of delivery. Many physicians, gifted with a certain eloquence of voice and manner, have a faculty of entertaining their auditors with a sort of medley in which neither plan nor purpose is apparent. They may discontinue speaking at any point, and no one would feel its incompleteness, or be in anywise disconcerted. After hearing such a speaker one is conscious of having remembered nothing in particular, and carries away no impression save that of having been pleased. With other physicians the marshaling of sentences and propositions is apparent from the beginning, and the march to a conclusion as concerted and orderly as the advancing columns of an army.

As one of the greatest elements of success in good speaking, may be mentioned careful and thorough preparation, and a clear idea of the subject to be discussed. No physician can expect to sway his hearers unless he is a perfect master of the subject in hand. In growing earnest, impressive, or in reaching for a climax, it is not necessary for him to rant or roar. Much energy is wasted by professors in lecturing to medical students in this way that might be advantageously saved. To be energetic and eloquent, it is not necessary to declaim boisterously.

Many physicians begin speaking before they know precisely what they mean to say. Others perceive things clearly, and those having this power, though of slow mind, may speak more coherently and fluently than those who, without clearness of thought, possess greater animation. The unlearned and untrained may think as clearly and deeply, within the circle of their powers, as the accomplished; and frequently, on account of freedom from abstraction or distraction produced by a multiplicity of ideas, they penetrate to the heart of a subject, and reason more shrewdly and correctly than do the educated. This is particularly true of country physicians. In discussing ordinary medical and surgical topics, they frequently surpass the average college professor in clearness of thought, command of language, ease and vigor of expression.

Paucity of Language.—Paucity of language is a common defect of extemporaneous speech, and a stenographic report of several speeches delivered by the same person will exhibit this defect in a mortifying manner, when, in response to the requests of those who have heard them, the orator attempts to collect them for publication. It is then difficult for him to believe his vocabulary so meager, the forms of his sentences so similar, that so many phrases often recur, and that there seems to be an irresistible tendency to use the same words, even when other words express the shade of meaning which he endeavors to communicate with greater accuracy than the familiar terms which go so trippingly over his lips. Excess of repetition in the same speech is a serious evil and sufficient to account for the lack of success which attends many who are nobly endowed in voice and figure, and not destitute of a rich and expressive vocabulary.

Oft-Recurring Phrases.—Scattered throughout a reporter's note-book will be found such oft-recurring phrases as, "Permit me to say"; "I am ready to declare"; "I am bound to maintain"; "This is a fact and nobody can deny it"; "I don't mean this"; "In addition to this I mean"; "What I mean is this"; "It seems

to me"; "It appears to me"; "One word more and I have done."

These are a few of many examples of such oft-repeated expressions. The legal and ministerial professions are as guilty as the medical profession in this regard. An old physician once said to me that whenever a man used such phrases during an impromptu speech he was "simply sparring for thought, and as filling material they came in nicely, but should never appear in print."

Reporters Sometimes Unjustly Assailed for Inaccurate Reports.—Occasionally a physician will severely and unjustly denounce a report of a lecture or discussion as inaccurate without stopping to think of the causes which lead to it. Inaccurate reports may be largely attributed to:

1. Noises in the room or hall in which the reporter is taking notes.
2. Indistinct utterance or imperfect enunciation on the part of the speaker himself.
3. A conversation being carried on near the reporter's table between two members, while some one is addressing the society.
4. The speaker dropping his voice at the end of sentences, the final words being inaudible or doubtfully heard.
5. Extreme hoarseness on part of the speaker.
6. Too great a distance between reporter and speaker, particularly when the latter has a voice of feeble carrying power.
7. Stifling of the speaker's voice by the noise of a car heard through open windows.
8. Sneezing or coughing during debate.
9. The slamming of doors.
10. Noises from the street during hot weather, when the windows of the hall in which a meeting is being held are open.
11. Clearing of the throat on the part of some person while another is speaking.
12. Partial, but temporary, deafness on part of the reporter induced by a cold.
13. A change in the physical and mental condition of the reporter, induced by a long siege of note-taking, the mind acting sluggishly and the muscles protestingly.
14. The speaker turning his back toward the reporter.

Physicians and Lawyers Compared.—The art of speaking well is not confined to statesmen, jurists, and clergymen. The medical profession, like the ministerial and legal professions, has orators within its ranks. The experienced doctor strives to use the simplest and most expressive words. According to Bryce, rhetorical excellence consists in: "1. The power of finding good ideas and weaving effective arguments. 2. Skill and taste in the choice of appropriate words. 3. Readiness in producing appropriate ideas and words at short notice. 4. Weight, animation, and grace in delivery."

I have had the pleasure of reporting the utterances of several eminent lawyers from time to time, and, to speak candidly, I must confess that they were not the superiors in any sense of many of the physicians whose impromptu speeches I have reported. I shall mention three striking examples of the extemporaneous type of speakers in the medical profession, and later submit a classification.

Dr. Nicholas Senn is a fluent, forcible and impressive speaker. He has an excellent command of language. There is a richness in his diction, a copiousness, ease, and variety in his expression which are rarely surpassed by the best extemporaneous speakers. The arrangement of his sentences in debate seems never to have been studied, yet every word falls into its proper place. He displays his ability as a debater to best advantage when under a heavy fire. On one occasion, during a spirited discussion, which was called forth by a paper which he had read, he sat with a smile on his face, listening attentively to everything that was being said, while several prominent surgeons were severely criticising the operation he had proposed; but when the time came to reply to the various criticisms that had been showered upon him, in an unassuming way he scored his opponents one after the other in a dignified but merciless manner, and showed with great clearness of statement how feeble and groundless were some of the views that had been advanced.

Dr. Charles A. L. Reed, of Cincinnati, Ohio, the President of the American Medical Association, is a splendid example of the extemporaneous speaker. As a debater he is well equipped. He is known for his elegant diction, his scholarly references, and the ornateness of his phraseology. His well-rounded sentences are marvels of construction. No matter how sudden the summons, or what the subject, a speech from him is always interesting. His rhetoric is faultless; his delivery graceful and easy.

Dr. Joseph M. Mathews, of Louisville, Ky., is an easy, graceful, fascinating, polished speaker. His style is notable for its simplicity. He can adorn any subject. Those who have had the pleasure of hearing his celebrated lecture on "The Lights and Shadows of a Doctor's Life," will recall with what eloquence, pathos, and flashes of humor he treated this subject. One minute his hearers were on the verge of shedding tears, the next convulsed with laughter, so easily and tenderly did he touch the chords of the human heart.

As examples of good extemporaneous speakers in the medical profession, men who make themselves heard, who know and feel what they say, and who can command the undivided attention of any audience, I may mention Drs. W. W. Keen, William E. Quine, G. Frank Lydston, Harold N. Mover, J. Henry Carstens, James B. Herrick, Weller Van Hook, Arthur D. Bevan, D. R. Brower, A. M. Cartledge, J. B. Murphy, Henry M. Lyman, William A. Evans, F. W. McRae, L. S. McMurtry, Dudley S. Reynolds, W. E. B. Davis, Rudolph Matas, T. J. Happel, Richard Douglas, George Ben Johnston, Lawson Tait, Joseph Eastman, Sir Thomas Grainger Stewart, William Macewen, and a host of others did space permit.

Classification of Speakers.—The reporter is constantly listening to speakers, good, bad and indifferent, and soon comes to recognize the qualities that cause a man to rank in one or other of those classes. He is essentially a speech-taster. It is a significant fact that speeches delivered in a quiet, deliberate way, when the speaker has a good command of sound English, and has something to say that is worth hearing, nearly always give the reader the idea that they must have been delivered with great fluency. On the other hand, the really fluent speeches, those with long sentences, each sentence containing several clauses, and sometimes one or more parentheses, give the reader of them the idea of hesitation and lack of preparation. A study of the different styles of doctors as speakers encountered during an extensive and varied reportorial experience is an education in itself, and by virtue of his vocation the reporter is compelled to study them. As there is no one more

competent to criticise physicians as speakers than the man on whom devolves the duty of reporting them, I have made an attempt to classify the speakers whose utterances I have reported from time to time in medical societies. We have the following classes:

1. The moderately slow speaker.
2. The exuberant and tempestuous speaker.
3. The musical, flowery speaker.
4. The loud, husky speaker, whose voice is somewhat indistinct.
5. The grandiloquent speaker.
6. The rapid and spasmodic speaker.
7. The excessively rapid speaker.
8. The rapid, involved and indistinct speaker.
9. The one who hurls disconnected sentences at the reporter.
10. The clear, distinct, unassuming speaker, who talks with absolute precision, with perfect grammar. He is a *rara avis*.
11. The physician who commences his speech in a deliberate, measured, distinct, far-reaching tone of voice, and who, when he becomes influenced by the magnetism of his audience and their rapt attention, gives vent to rare flights of oratory.
12. The irrepressible speaker, who does not know enough to sit down while he is down, but who monopolizes the precious time of an important convention in saying practically nothing; still, his remarks are reported, transcribed, and then, perhaps, liberally blue-penciled, or consigned by the secretary of the association or editor to the waste-basket.
13. The one who jumbles up his nominative, his accusative and his verb with such picturesque incoherence that it is almost impossible to make head or tail of what he means.
14. The physician who threads his way through a long and apparently intricate sentence, never losing the connection of the parts, and coming out at the end with absolute precision.
15. The man who does not realize that his first duty is to make himself heard.
16. The physician who never completes his sentences, but is utterly oblivious of that fact when he criticizes the report of his speech.
17. The physician who misquotes, and then blames the reporter if he has not supplied the correct quotation.
18. The foreigner, who imagines that he speaks like a native.
19. The speaker who drops his voice at the end of sentences.
20. The low, mumbling, conversational style of speaker, who indulges in a free and rapid flow of words which taxes the reporter's skill and dexterity.
21. The physician who is extremely subtle in the use of words and phrases. The shades of meaning are so delicate by the judicious selection of them that the reporter must retain the original force and color of each sentence.
22. The physician who habitually clothes his hazy ideas in loose, disjointed talk, which, if transcribed as uttered, would mar, if not ruin, his reputation.
23. The one with a slow and fatiguing mode of utterance, whose sentences are diffuse, intricate and deficient both in eloquence and precision.
24. The physician who is clear, forcible, persuasive, with an eloquence natural and direct. (This type of speaker usually spends much time in meditation and in the composition of his speeches.)
25. The physician whose speeches are notable for their subtlety of discrimination and depth of learning.
26. The physician who evolves original thoughts and whose voice and gesture emphasize living truths.
27. The eccentric physician who stifles and distorts natural eloquence. His introductory is long; divisions and subdivisions of speech are perhaps illustrated by a pointless story.
28. The physician who carefuly selects his words and utters sentences that are models of syntax.
29. The man whose style is natural, easy and varied, with short clauses expressing vivid ideas.
30. The tautological physician.
31. The vivid, brilliant speaker who pours out a torrent of words, dexterously handled, and whose remarks are full of sudden turns and surprises, but are illumined by ingenious reasonings.
32. The man with a strange and unfamiliar style, whose sentences are portentously long.
33. The rapid and monotonous speaker who becomes tangled in his own sentences, and mispronounces words.
34. The physician who is known for his elegant diction, his scholarly references, and the ornateness of his phraseology.
35. The physician who stutters, speaks indistinctly, and yet is extremely technical.
36. The pompous speaker.
37. The physician who begins a sentence, but is not satisfied with its construction; he therefore draws up, makes a plunge in another direction, wanders about in a maze, and finally lands in a region of impenetrable obscurity.
38. The physician who is afflicted with that terrible malady—*cacoethes loquendi*.

The two qualities in a speaker which most delight reporter and hearers are lucidity of thought and distinct utterance. Purity of tone, clearness of enunciation, and deliberate utterance are what make public speakers heard and interesting.

THE IDENTIFICATION OF DEXTROSE IN HUMAN URINE.*

HEINRICH STERN, PH.D., M.D.

Professor of the Diseases of Metabolism, College of Physicians and Surgeons, St. Louis; Visiting Physician, New York Red Cross Hospital; Attending Physician, St. Elizabeth's Hospital; Member American Medical Association; Member American Chemical Society; Fellow New York State Medical Association, etc.

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(Concluded from page 683.)

Repeated filtration of the urine through animal charcoal causes retention by the latter of uric acid, urates, coloring substances, some albumin, but also of certain amounts of dextrose. Powdered animal charcoal, freed from impurities as well as possible by washing and by extraction with hydrogen chlorid, is put to the height of 3 cm. into a filter measuring 5 to 6 cm. in diameter. Twenty to 40 cm. of urine are repeatedly filtered through this layer, until the filtrate is rendered perfectly colorless. As particles of dextrose are retained by the charcoal, this should be washed three times with distilled water, and each of the three washings is examined separately. Fehling's test is then applied to the filtered urine and the washings. The advantage obtained by this procedure is obvious, still decolorized urine may

*Read at the Sixteenth Annual Meeting of the Fifth District Branch of the New York State Medical Association, held in Brooklyn, May 22, 1900.

yet possess reducing factors.[9] It was found that, notwithstanding the absence of dextrose, the test occasionally reacted positively, and that, on the other hand, dextrose, which was positively recognized by other processes, could not be detected when repeated filtration through animal charcoal had taken place. The modification of Worm-Müller is a decided improvement on the older copper tests. It does not, however, eliminate the afore-mentioned disturbing factors, but their occurrence is not so formidable. This method depends on the fact that at a temperature below 70 C., reducing substances other than dextrose either do not react at all with the Fehling's solution, or only to a diminished degree. The reagent is prepared by dissolving 10 grams of potassium and sodium tartrate in a 4 per cent. solution of sodium hydroxid, or in a 5.6 per cent. solution of potassium hydroxid; 2.5 cm. of this solution, together with 1 c.c. of a 2.5 per cent. solution of copper sulphate, are heated not quite to the boiling-point. Five c.c. of the suspected, previously filtered, albumin-free rendered urine is heated to the same degree and at the same time. Twenty to twenty-five seconds are allowed to elapse for cooling, after which the urine in small portions is carefully put into the test-tube containing the reagent. The bluish-green color of the latter rapidly disappears if glucose is present; yellow-red cuprous oxid is separated, and together with xanthin bases and uric acid, is kept suspended in the mixture for a long time. The cuprous oxid is readily recognized by holding the well-illuminated tube against a dark background. If no cuprous oxid is separated within five or ten minutes the test should be repeated with 1.5 c.c. of the solution of copper sulphate; then, if still negative, 0.5 c.c. more of the copper solution—that is, 2 c.c.—are used. The testing, if the cuprous oxid has not separated in the meantime, is continued, and for each successive application 0.5 c.c. more of the copper solution is added, until 4.5 c.c. are utilized for one test.

Phosphates, the presence of which may give rise to wrong interpretations, unlike cuprous oxid, are thrown down in short order. All the other copper tests, Salkowski's, Fehling's, Haines', Pavy's and Elliott's, are nothing more than modifications of the original copper test—Trommer's; they are affected by the very same disturbing factors, and are consequently liable to kindred erroneous interpretations. Haines' and Elliott's methods, however, possess the advantage over the other modifications that only very small amounts of urine are needed. Eight drops of urine, and never more, are utilized in performing one of these tests, which, therefore, lack somewhat in sensitiveness. On the other hand, by the utilization of only small amounts of urine, a possible pseudo-reduction by a non-saccharin reducing agent is excluded to some extent, as but eight drops of urine, even if in a somewhat higher degree of concentration, do not contain sufficient quantities of reducing substances other than dextrose to effect a pseudo-reduction.

THE PHENYLHYDRAZIN TEST.

This test depends upon the quality characteristic of phenylhydrazin to form compounds—osazones—with different varieties of sugar. The union with grape-sugar—phenylglucosazone ($C_{18}H_{22}N_4O_4$)—occurs in yellow needle-shaped crystals, which must be detected by the aid of the microscope. Jaksch, Jolles, Ultzmann and Havelburg devised different methods for the execution of these tests. Havelburg's modification, which is a much more convenient process than the original mode of application, is yet not mentioned by the standard works. In my "Recent Studies in Urinology," N. Y., 1898, I gave the following directions for the application of Havelburg's modification: "Put in a test-tube 1.2 grams phenylhydrazin hydrochlorate and 1.8 grams sodium acetate; add 10 c.c. of distilled warm water. Warm a little and add 10 c.c. of the suspected, previously filtered, urine and from eight to fifteen drops of chloroform. Shake well and set aside. The chloroform will soon fall to the bottom, and, if sugar is present in the urine, a fluid layer will be produced above it in which the phenylglucosazone crystals are contained. Remove part of the fluid layer by means of a pipette and examine it on a slide under the microscope for crystals of phenylglucosazone."

Tolles recommends the following modification: To 10 c.c. of albumin-freed urine of normal consistency (of concentrated urine 5 c.c. are utilized and diluted with an equal volume of water), 0.5 grams phenylhydrazin hydrochlorate and 1 gram of sodium acetate are added. The mixture, while warmed for an hour or longer on a water bath, is repeatedly agitated; after cooling, a small amount of the yellowish deposit is examined under the microscope for phenylglucosazone.

Notes.—The phenylhydrazin test, formerly considered the most sensitive and trustworthy method for the detection of urinary glucose, in point of accuracy, has been decidedly overrated, for normal urine treated with phenylhydrazin may occasionally furnish crystals, which in appearance do not at all differ from those of phenylglucosazone. A certain individual's urine, which I had occasion to examine more than thirty times, and which in every instance proved to be absolutely normal, when subjected to the phenylhydrazin test, always furnished crystals seemingly identical with those of phenylglucosazone. Glucose, however, and glycuronic acid combinations were positively not contained in the urine. On the other hand, the phenylhydrazin test may at times not respond when the presence of sugar has been proved beyond a doubt by other methods. Shape and arrangement of the crystals are apparently of no significance regarding the nature of the osazone constituents. In order to render the phenylhydrazin test conclusive, the true nature of the crystals has to be ascertained. This is accomplished by a determination of their melting-point. Other urinary constituents besides glucose combine with phenylhydrazin to form either insoluble, or, with difficulty, soluble, compounds. With the pentoses, pentosazone; with acetone, acetonhydrazon, $(CH_3)_2C{:}N.NH.C_6H_5$, are furnished. Glycuronic acid, which never occurs in the free state in the urine, combines with phenylhydrazin; so does oxalic acid; carbamid in concentrated urine of the dog also enters into a union with phenylhydrazin.

Disturbing factors and sources of error.—Glycuronic acid combinations, fructose, pentoses. While in all probability glycuronic acid as such is never found united with the phenyl salt in human urine, some of its glycosidal combinations undoubtedly form osazones. In appearance and solubility the phenylosazone crystals of glycuronic acid or its combinations are analogous to the crystals of phenylglucosazone. Glycuronic-acid phenylosazone is distinguished from phenylglucosazone by its melting-point. The former melts at 114 to 115

9. Robert Saundby (Brit. Med. Jour., April 14, 1900) is still of the opinion that all of the reducing agents except sugar are removed by this process. Decolorization of normal urines, however, is by no means identical with the separation of all possible reducing substances.

C., phenylglucosazone at 204 to 205 C. and in its impure state at 173 to 194 C. The osazones of the various sugars possess specific characteristics as to form, melting-point, solubility and optical behavior. The osazone of fructose, however, is identical with glucosazone. Fructosazone forms somewhat more rapidly than glucosazone, which fact seems to be due to the quicker decomposition of levulose. Pentosazone differs from glucosazone in its melting-point, which is at 159 to 160 C. Lactosazone melts at 200 C.

MOORE-HELLER'S TEST.

Moore-Heller's test depends upon the decomposition which dextrose undergoes when it is boiled with sodium or potassium hydroxid. To the urine contained in a test-tube one-third of its volume of sodium or potassium hydroxid solution is added, after which the mixture is boiled. If sugar is contained in the urine a brownish coloration will presently ensue. The change in color is more readily noticed if only the surface part of the mixture is heated. The brown color becomes more intense if the boiling is continued for one or two minutes, provided the percentage of glucose is above 0.5. The alteration in color is due to the production of glucic and melassic acids. On addition of a little nitric acid the brown color disappears, and the odor of caramel or of formic acid is evolved.

Notes.—The precipitate separating from the urine after the latter has been rendered alkaline, and which increases after the mixture has been subjected to heat, is of no moment, as far as the reaction is concerned, as it is composed of earthy phosphates; it is better to separate them by filtration before the mixture is boiled. As normal urine, when subjected to heat, will also assume a slight degree of brownness, the darkening must be well pronounced if sugar is contained in the examined specimen. Urines containing carbonate of ammonium must be repeatedly boiled with an excess of the alkaline hydrate before results can be obtained.

Disturbing factors and sources of error.—Impure alkaline solutions, mucin, proteids, biliary pigments, alkaptonic acids. The reagents should be chemically pure and should be kept in green-glass bottles. Urine rich in mucin, when boiled with NaOH or KOH, darkens to about the same degree as does a urine containing a small percentage of glucose. Mucin and proteids are previously separated by boiling and filtering. Biliary pigments occurring in urine call forth a brown coloration of the latter on the addition of NaOH and KOH without the employment of heat. They are removable to some extent by filtering the urine through animal charcoal. Urine exposed to the air and containing alkaptonic acids, when treated with NaOH or KOH, assumes a dark-brown color. However, I have noticed the gradual appearance of the dark coloration in urines containing alkaptonic acids which were simply left exposed to the air when no caustic alkalies had previously been added.

PENZOLDT-RUBNER TEST.

Equal parts of urine and of a concentrated solution of normal plumbic acetate, $Pb(C_2H_3O_2)_2 + 3H_2O$, are added together, and the resulting precipitate is filtered off. To the filtrate, ammonia is added, drop by drop, until a heavy white deposit of lead saccharate is formed. On the application of heat the precipitate turns to a flesh color or to a darker shade of red. If the heat applied does not exceed 80 C., the red coloration is indicative of glucose only, and not of lactose.

Notes.—Urines of a higher specific gravity than 1010 should be diluted before the test is applied, which is spoiled by an excess of ammonia. Voit and Moritz devised modifications of this test, which, however, do not seem to possess any special advantages. I have used the following modifications for the past ten years with uniformly good results. I cite from my "Recent Studies in Urinology," page 33: "Take from 1 to 5 c.c. of urine and put to it an equal amount of ammonia hydroxid; add about 5 drops of a strong solution of lead acetate. A whitish, flocculent sediment composed of sulphate, phosphate and chlorid of lead and hydrated lead oxid, $PbO(OH)_2$ appears immediately. Heat gently a part of the sediment over an alcohol lamp until two or three bubbles ascend. If glucose is present there will appear in the heated region of the sediment a well-defined, distinct pink spot, the intensity of which is dependent on the amount of dextrose present." I have found that when glucose occurred in as small an amount as 0.1 per cent., the pinkish spot was plainly noticeable. If glucose is present in smaller quantities than 0.1 per cent., the spot on the heated portion of the sediment will appear yellowish. This spot, on account of the coloration of the urine, is not always noticeable. It is best to use test-tubes of the smallest caliber only, when applying this test, and I advise the use of new tubes—previously well cleaned with distilled water—if urine containing but small amounts of dextrose is to be scrutinized. Albumin, uric acid, creatinin, pigments and the alkaptonic acids do not influence the reaction.

Disturbing factors and sources of error.—When the test is properly executed apparently no source of error arises. It is possible, however, that certain glycuronic-acid combinations may call forth a similar circumscribed coloration in the precipitate. Indoxyl-sulphonic acid is present in the precipitate, and may, under certain conditions, give rise to a discoloration.

THE METHYLENE BLUE TEST.

Frœlich[10] employs the following procedure (Stern, Recent Studies in Urinology): "To 10 c.c. of the urine to be examined add about 5 c.c. of a concentrated solution of sugar of lead (neutral plumbic acetate), shake well and add 5 c.c. of a concentrated solution of lead acetate (basic lead acetate). Put on a dry, open filter. The filtrate will be almost always of a water-like, colorless, sometimes slightly yellowish, appearance. Place into a test-tube some of the filtrate; into another test-tube put an equal volume of a concentrated aqueous solution of methylene blue (1 gram of the purest methylene blue in 300 parts of water). Render the methylene-blue solution strongly alkaline by the addition of potassium hydrate (to 5 c.c. of the methylene-blue solution add about 1 c.c. of a 10 per cent. solution of KOH). Warm the alkaline solution of methylene blue over an alcohol lamp and add to it the filtrate contained in the other test-tube and heat again to the boiling-point. If dextrose be contained in the urine, the bluish-black mixture will turn lighter, become whitish, and finally clear and transparent, with a faint tinge of yellow. The reaction is not disturbed by the excess of lead, which is thrown down as a white deposit. Frœlich employed in every instance 5 c.c. of the filtrate, and 5 c.c. of the solution of methylene blue, with the addition of 1 c.c. of KOH solution to the latter; however, a few drops of the filtrates of urines

10. Centralblatt f. innere Med., Jan. 20, 1899.

abundant with glucose are sufficient to decolorize 5 c.c. of the solution of methylene blue. When the percentage of dextrose is small, less than 2 per cent. the equal volume of the filtrate must be added. The discoloration of the mixture occurs most always within twenty to twenty-five seconds after the removal of the tube from the lamp. The tube should be kept as quiet as possible, as even a slight shaking may result in a bluish coloration of the upper layers by the oxygen of the atmosphere. The decolorized mixture will again turn bluish on shaking, which will, however, disappear upon standing. The limit of sensitiveness of this test Frœlich maintains to be between 0.4 and 0.5 per cent. glucose. With a percentage of less than 1 per cent., the reaction will occur somewhat slower. Every urine may decolorize methylene blue. Urea, uric acid, chlorid of sodium and albumin do not reduce methylene blue in an alkaline solution. Creatin and creatinin, according to Frœlich, will not reduce the same; neither will the biliary pigments, which, however, will turn the solution to a green color. Those urinary constituents, which, besides glucose, may decolorize methylene blue—pigments and glycuronic acid and its compounds—are thrown down by the lead solutions, and, therefore, do not disturb the test.

Disturbing factors and sources of error.—Levulose, creatinin may reduce methylene blue in an alkaline solution, also creatin on boiling for a longer period. Normal urine, as I have repeatedly noticed, will also cause a reduction of the reagent. Normal urine possesses the reducing qualities of a 0.1 per cent. solution of glucose.

THE PICRIC ACID TEST.

A solution of grape-sugar on being heated with an equal bulk of saturated watery solution of picric acid and some potassium or sodium hydroxid will assume a beautiful dark-cherry coloration. The alteration in color is caused by the production of picramic acid. The presence of albumin does not interfere with this test.

Disturbing factors and sources of error.—Uric acid, creatin, creatinin, acetone, pigments, glycuronic acid combinations. Urine free from glucose to which this process has been applied undergoes a similar, but slighter, coloration. The power of reducing picric acid is possessed by normal urine to the same degree as by a 0.1 per cent. solution of dextrose.

THE TEST WITH SODIUM-SULPHO-INDIGOTATE.

$C_{16}H_8N_2O_2(SO_3Na)_2$.

Take a solution of indigotin—disulphonic acid—$C_{16}H_8(HSO_3)_2N_2O_2$—saturated with sodium carbonate, on being boiled with a solution of dextrose turns green, purple, red and yellow. The mixture resumes its original blue coloration on shaking the still warm yellow solution, when the order of appearance of the colors is reversed—yellow, red, purple, green and blue. Care should be exercised in avoiding agitation of the tube during heating.

Disturbing factors and sources of error.—Pepton, glycuronic acid compounds, inosit, lactose, gallic and tannic acids, salicylic acid, salol, salicylates.

THE TEST WITH ORTHONITROPHENYLPROPIOLIC ACID

$C_6H_4(NO_2)C:C.COOH$

G. Hoppe-Seyler's test: Orthonitrophenylpropiolic acid, on being boiled with glucose and sodium carbonate, furnishes indigo; excess of sugar causes a reduction of indigo-blue to indigogen (indigo-white) $C_{16}H_{12}N_2O_2$. The test is applied as follows: To 5 c.c. of the reagent—0.5 per cent. of the solution of orthonitrophenylpropiolic acid in caustic soda and water—10 drops of the suspected urine are added, after which the mixture is boiled from fifteen to thirty seconds. If the solution turns dark blue—indigo reducing agents—at least 0.5 per cent. sugar are present.

Notes.—The test should be applied only with an excess of the reagent. Normal urine causes a green coloration after at least 1 c.c. has been added. A pronounced blue coloration with normal urine occurs but rarely. Albumin does not interfere with the test.

Disturbing factors and sources of error.—Lactose, indoxyl, and indoxylic acid cause the same reaction; creatin in excess calls forth a green coloration.

THE TEST WITH PARADIAZOBENZOLSULPHONIC ACID.

Penzoldt's test: If to a solution of sugar rendered alkaline with fixed alkali, paradiazobenzolsulphonic acid —$C_6H_4N_2SO_3$—is added, a red coloration turning gradually to violet will ensue within ten or fifteen minutes. When properly diluted the mixture may then show an absorption band between D and F and another one at G.

Notes.—Penzoldt uses the reagent in a dilution of 1 to 60 parts of water. The reagent should be kept under chloroform to prevent its explosion.

Disturbing factors and sources of error.—Albumins react with the reagent; like sugar; acetone; phenol and brenzcatechin.

THE FURFUROL TESTS.

The decomposition of the carbohydrates by sulphuric acid occurs under the production of furfurol. This is detected, even if it is present but in traces, by the color of the combination which it forms with certain chemicals. Dextrose furnishes furfurol reactions with alphanaphthol, thymol, xylidin, and under certain conditions also with resorcin.

The reaction with alphanaphthol: If 1 c.c. concentrated sulphuric acid is allowed to run beneath 0.5 c.c. of a diluted sugar solution containing one drop of a 15 per cent. alphanaphthol solution, there appears at first on the line of contact of the two fluids a greenish coloration, which, however, does not pertain to the reaction, and afterward above the latter a ring of dark violet. If the contents are now shaken together the mixture assumes a carmin-red coloration with a bluish hue. Spectroscopically a narrow band between D and E, disappearing afterward, and darkening, beginning at F and extending to the violet end, is noticed.

Notes.—The urine should be rendered free of albumin. The green coloration at the point of contact of the two solutions is caused by nitric or nitrous acid contained in the sulphuric acid. The reagents should be chemically pure and the test-tubes should be boiled in distilled water and thoroughly cleansed before the test is applied. The colorations are best seen in strong light before a white background — sheet of unruled white paper. Carbamid, uric acid, creatinin, xanthin, allantoin, phenol and hippuric acid do not interfere with the test.

Disturbing factors and sources of error.—Other carbohydrates, glycosides, serum albumin, peptone, some unknown urinary constituents.

The reaction with thymol: Two drops of a 15 to 20 per cent. alcoholic solution of thymol are mixed with 1 c.c. of the suspected urine, after which concentrated sulphuric acid is added. On shaking, a vermilion-, or rubin- or carmin-red color of the mixture ensues.

Note.—Thymol is not very well adapted for the detection of the carbohydrates in urine as the color reaction

may not be distinguishable from the coloration which urine attains with sulphuric acid alone.

Disturbing factors and sources of error.—The same as with alphanaphthol.

The reaction with xylidin: Strips of paper are dipped in a mixture composed of equal volumes of xylidin and glacial acetic acid to which some alcohol has been added. After the papers have been completely dried they are exposed to the vapors of furfurol—the urine having been warmed previously with strong sulphuric acid. Furfurol turns the papers red.

Disturbing factors and sources of error.—About the same as with alphanaphthol.

HORSLEY-PRATESI'S TEST.

This test depends upon the reduction of potassium bichromate by the products of sugar decomposition. Potassium hydrate 2.5 grams are dissolved in 60 grams of a very strong solution of potassium silicate—water-glass solution—to which 2 grams of potassium bichromate is then added. The solution must be kept in a tightly stoppered bottle. A small sheet of tin is cut into strips, each measuring about 7 cm. in length and 1 cm. in width. A drop of the reagent is placed with a glass rod on the end of one of the strips of tin and there dried by holding it over a small flame. Four more drops of the reagent are allowed to evaporate on the same spot. When the dried reagent on one of these prepared strips is heated it swells up and assumes a distinctly yellow color. When testing for glucose, the suspected urine, drop by drop, is allowed to come in contact with the reagent heated; heat being applied after each additional drop of urine, to facilitate evaporation. A green coloration makes its appearance when sugar is present in the proportion of 0.5 per cent. and over.

Disturbing factors and sources of error.—Albumins, glycuronic-acid combinations, pigmentary bodies.

THE FERMENTATION TEST.

This is one of the most reliable tests for the detection of urinary glucose provided the latter occurs in quantities above 0.5 per cent. Certain vegetable organisms by their vitality call forth disintegration of grape-sugar. The products of decomposition vary according to the species of organism present. Beer-yeast breaks up the sugar molecule into carbon dioxid, and alcohol in neutral or faintly acid solutions. In the main the fermentation occurs thus: $C_6H_{12}O_6 = 2C_2H_6O + 2CO_2$. Lactic acid yeast converts glucose into lactic acid; lactic fermentation may take place in diabetic urine if ammonium carbonate has replaced the latter's carbamid. Butyric acid yeast converts sugar into butyric acid. Myeoderma aceti causes conversion of dextrose into an acid identical with glucinic acid. Kefyr produces fermentative changes of glucose. A number of other specific micro-organisms cause specific fermentations. The fermentation test for urinary glucose is made with fresh beer-yeast, or with dried German yeast, a combination of beer-yeast and dry starch, at a constant temperature of 33 to 35 C. For qualitativ testing the fermentation tubes devised by Fritz Moritz[11] suffice. The determination of dextrose by collecting and measuring the carbon dioxid evolved during the process of fermentation may be approximately done with Einhorn's or Fiebig's saccharometers. The method of determining the amount of glucose by the evolved carbon dioxid must always remain inexact, as the yeast *per se*, no matter what precautions are taken, furnishes small amounts of alcohol and carbonic acid gas. Einhorn's apparatus presents a further disadvantage in its open bulb, which permits the escape of considerable quantities of carbon diozid. The detection and determination of glucose by Robert's method—by ascertaining the density of urine before and after fermentation and by calculating the urine's contents of sugar by the loss of specific gravity during fermentation—is by far the most practical and trustworthy means in the hands of the general practitioner. Lohenstein and Stern have devised apparatus for the more practical and convenient application of this method. Stern's apparatus, moreover, may be utilized for the *detection* of glucose only, by interrupting the fermentation after an hour or so and by ascertaining any decline in the specific gravity of the dextrose solution.

11. Münchener Med. Wochenschrift, 1891, Nos. 1 and 2.

Disturbing factors and sources of error.—Maltose, fructose, and similar carbohydrates ferment with commercial yeast. The process, however, is a much slower one. It happens occasionally that a urine containing glucose is not fermentable. This is due to anti-fermentative agents, as salicylic acid, salol, arbutin, extractum myrtilli, etc., after their internal administration.

Polarization.—The value of polariscopy for the detection of urinary dextrose is dependent upon the sensitiveness of the instrument used. Diabetic urine is dextrorotatory. If the urine is light shaded and transparent the examination may be made without further manipulations; if, on the other hand, it contains proteid material and pigmentary substances in excess, they should be first eliminated. A 10 per cent. basic lead acetate solution and repeated filtration is used for this purpose.

Disturbing factors and sources of error.—Not every rotation of polarized light toward the right is due to the presence of glucose, as other dextro-rotatory constituents may occur in the urine. Pronounced rotation to the right, however, is conclusive evidence of the occurrence of dextrose. Maltose, lactose, dextrin, and glycuronic acid turn the polarized ray to the right. The urine may also be dextro-rotatory after the ingestion of certain drugs, especially alkaloids or glucosids; morphin has been found to be optically active in this manner. Dextro-rotation due to urinary glucose may be averted or neutralized by simultaneous occurring levorotatory substances, as proteid bodies, levulose, beta oxybutyric acid, cystin, and some medicinal agents.

SUMMARY.

The brief discourse upon the nature and value of the most frequently applied tests for the detection of urinary glucose divulges the important fact that there is not a single method which is entirely free from possible sources of error. Some of the processes for the recognition of grape sugar in human urine, it is true, possess considerable value and are relatively trustworthy; perfection, however, is not found in any. Absolute reliance can therefore not, and should not, be placed on any single test. Among the numerous methods in vogue, three especially are of considerable value, namely, Nylander's, Penzoldt-Rubner's and the fermentation tests. The great value of Nylander's modification of the bismuth test is virtually but an indirect one—*the non-reduction of the bismuth salt being positive evidence of the absence of pathologic amounts of dextrose.*

Penzoldt-Rubner's ammonia-lead acetate reaction is the most brilliant and reliable process at the command of the physician, the fermentation test being a close second in point of reliability. There are two great advantages the Penzoldt-Rubner test possesses over the fermentation process, viz., it renders immediate results and

its limit of reliability is more extended. Although a single testing method *per se* can never furnish positive proof of the presence of urinary glucose, especially when this occurs in amounts less than .5 per cent., a number of judiciously selected control tests cautiously applied may complete the identification.

For the positive recognition of dextrose in human urine—in routine work—I proceed in the following manner: About 15 c.c. of the freshly voided, non-ammoniacal urine is boiled and filtered. To a portion of the filtrate Nylander's test is applied. If, after prolonged boiling the precipitate retains its white color, I stop with the testing there and then, as no pathologic quantities of grape sugar are contained in the urinary fluid. If, however, the bismuthic salt has undergone even a slight reduction, another portion of the filtrate is subjected to the modification of the Penzoldt-Rubner process described in the foregoing. In case the careful and repeated application of this test yields but negative results, it may be concluded that the urine is free from dextrose. On the other hand, if a pinkish spot has appeared on the heated region of the sediment, indicating the presence of either glucose or of a glycuronic-acid compound, a fresh portion of the urine is boiled, filtered, and subjected to the fermentation test in the urinoglucometer. If after the apparatus has been placed for a few hours under the proper temperature, the urine does not show a reduced density, either no glucose at all or in amounts less than .5 per cent. or anti-fermentative agents are contained in it A loss in specific gravity taking place soon after subjecting the urine to fermentation points with certainty to the occurrence of grape sugar in quantities above .5 per cent.

The urine, it is needless to say, must be in all instances a sample of the 24-hours product and the patient during the day of its collection and the 24 hours preceding it should not be under the influence of any medicinal substances.

In case the fermentation process, on account of its limitations, does not confirm the results obtained by the Penzoldt-Rubner test, in order to positively identify the dextrose I proceed at once to separate it from the urine. The isolation of glucose from the urine is accomplished by first condensing the same to the consistency of a thin syrup, after which about half its volume of ether is added. The mixture is then allowed to evaporate. At the end of a few days or a week all the syrup has crystallized. The granular mass is now treated with a small amount of alcohol to effect the removal of carbamid and extractive matters. Following this the residue is dissolved in boiling alcohol, the solution filtered while hot and the filtrate permitted to crystallize. The separated cystals are then repeatedly subjected to crystallization from alcohol, or preferably, methyl alcohol. Dextrose thus obtained is anhydrous, colorous, and forms four-sided transparent prisms; the crystals are closely grouped in little white, nodular masses, are hard, become less transparent and liquefy when exposed to moist air, melt at 144 to 146 C., and do not readily dissolve in water. In cold alcohol the crystals dissolve with difficulty, but are readily soluble in boiling alcohol. They dissolve slowly but in large amounts in methyl alcohol and are insoluble in ether. When carefully applied and with sufficient amounts of suspected fluid, this process may yield positive results even with normal urines. Insignificant quantities of dextrose crystals are, however, of no pathognomonic value.

If somewhat quicker results are desired, than with the confirmatory process just mentioned, I try to isolate the dextrose from the urine in the form of lead saccharate, $(PbO)_3\ (C_6H_{12}O_6)_2$. This method, however, is inferior to direct crystallization, as from 33 to 50 per cent. of the sugar is lost in the course of the process and as the deposit also contains urinary constituents other than glucose; principally indoxyl sulphonic acid.

Plumbic saccharate is best obtained from the urine in the following manner: An excess of saturated (by heat) solution of lead chlorid is added to 250 c.c. of fresh urine. The precipitate is then separated on a filter and the filtrate treated with ammonium hydroxid. Following this the precipitate is collected, washed, and suspended in water and decomposed either with oxalic or sulphuric acid or with hydrogen sulphid. By treating with calcium carbonate an eventual excess of oxalic acid, and by adding a concentrated solution of neutral lead acetate an excess of sulphuric acid is removed. After another filtration the filtrate is boiled to effect the separation of the excess of hydrogen sulphid. The filtrate reduces Fehling's solution.

Dextrose may be separated from the urine in a variety of other combinations; for instance, as sodium-chlorid-dextrose—$(C_6H_{12}O_6)_2NaCl+H_2O$—as potassium dextrose—$C_6H_{11}KO_6$—as cupric-hydroxid-dextrose—$C_6H_{12}O_65Cu(OH)_2$, and as benzoyl-dextrose. In my experience, however, the repeated crystallizations from alcohol or methyl alcohol is the most simple and at the same time the most reliable method for the preparation of the urinary glucose.

If after several attempts I have not succeeded in isolating glucose from the urine, I proceed to qualitatively determine the urine constituent or constituents which have caused the reaction. Quite a number of urinary substances other than glucose may bring about a reduction or pseudoreduction of the bismuth salt. The Penzoldt-Rubner test, at its worst, only reacts with two other urinary constituents—glycuronic-acid combinations and indoxyl in excess. In case this test has given positive results which as afterward proved were not found due to the presence of sugar, I make a search for the glycuronic-acid compounds and for indoxyl. I ascertain the nature of the bismuth reducing agent or agents, only when no reaction has occurred with the Penzoldt-Rubner test. The tests for indoxyl and some of its compounds are simple. I have already described a method for the detection of this urinary constituent.

It is a simple matter to differentiate between urinary glucose on the one hand and glycuronic acid or any of its compounds on the other, provided the former occurs in the proportion of .5 per cent. and over, as the latter do not ferment with alcoholic yeast. However, if glucose is present in but minute quantities, it is often very difficult to identify the glycuronic-acid combination, as it possesses reducing qualities similar to dextrose. The glycuronic-acid combinations are found in strongly levorotatory urines only, and they may thus be recognized. Glycuronic acid, *per se*, is, like glucose, dextrorotatory.

The identification of dextrose in human urine can not be accomplished by any single test. The copper tests, as Fehling's, Pavy's and Purdy's, serve admirably when employed for quantitative determination after identification has taken place. The employment of a copper test without a control process, even in mere routine work, is objectionable. How we are all apt to wrongly interpret a copper test is drastically shown by the following illustration:

A woman, aged 63, affected with diabetes mellitus for several years, was referred to me by her family physician.

A careful urinary analysis, made after the positive recognition of dextrose, revealed the presence of 101.8245o grams of this substance in 1925 c.c. of urine, the diurnal output. The patient was placed on a diet rich in proteids and fats, and at the end of one week, the urine was again subjected to examination. The patient was anxious to know the result of her week's dieting before she left for home—a neighboring town—and I myself, having been greatly pressed for time, applied Fehling's test. Reduction soon occurred and the patient was advised to continue with the rigid diet. A week after, under similar circumstances, on the application of the same test, reduction again ensued. The patient who positively denied having ingested any carbohydrates, remonstrated on being told that she had to still continue her abumin-fat diet, and gave me to understand that she would cease dieting. A more careful examination of the urine several hours after her departure pointed out the absence of glucose but revealed the presence of creatinin in excess—the true reducing agent. Undoubtedly the enlarged consumption of meat had given rise to an increased amount of creatinin. Thus, through sheer neglect a patient came nigh leaving me.

The concomitant phenomena of a supposed glycosuria are not always well pronounced and the diagnosis hinges, therefore, solely on an examination of the urine. In other instances where the symptoms unmistakably point to diabetes mellitus and the behavior of the urine to the different reduction tests is indicative of the presence of glycosuria, we may well assume the presence of this affection. However, without its definite identification we are never certain that glucose is the real reducing factor.

My experience does not tally with that of Saundby,[12] who maintains that during the many years he has devoted special attention to urinary diseases and diabetes, he had never seen but sixty-nine specimens of non-diabetic urine which reduced copper. I do not know what proportion these sixty-nine instances form of the total urinary examinations conducted by Saundby, but I assert that every sixth or seventh case of "diabetes" referred to me for treatment is neither diabetes nor glycosuria, and that the urine of the majority of these patients reduces copper in an alkaline solution.

Viewed in this light, we may readily understand some of the occasional spontaneous cures of diabetes, as these cases, in all likelihood, were but those of pseudoglycosuria. Pseudoglycosuria, however, is a negation in itself, an affection which does not exist, a euphemism for a reduction test erroneously interpretable or interpreted.

The identification of glucose in human urine has not been accorded the attention which its importance might demand, and a great deal can still be said and remains unsaid by me on this subject; but I feel that I have already transgressed beyond the limit of your patience. If you, however, agree with me as to the importance of this theme, you will not find me guilty of having carried coals to Newcastle.

56 East Seventy-sixth street.

12. Non-diabetic Glycosuria, Brit. Med. Jour., April 14, 1900.

Diagnosis of Stricture of the Esophagus.—Pauli has found that a stricture of the esophagus can be diagnosed by having the patient ingest 80 to 100 c.c. tartaric acid, and then in twenty minutes a solution of potassium bicarbonate. If the esophagus is freely permeable, nothing unusual is observed in consequence, but if there is a constriction, the mouth fills with foam from the effervescence.

The Cash Value of an Infant's Life.—Are more than nominal damages recoverable for the negligent killing of an infant incapable of earning anything, without direct evidence of pecuniary damage other than sex, age, and condition of health of the infant at the time? This was the contested question presented to the Supreme Court of North Carolina by the case of Russell vs. The Windsor Steamboat Company. Here, a male child five months old had been killed by the alleged negligence of the company, and the father brought this action to recover damages. However, he did not try to enforce the common law remedy, to which the court says that he would probably have been entitled, of an action based upon a loss of services. Instead, he sued as administrator, under the North Carolina statute, which does not regard the family relation, but gives the cause of action to the personal representative of the deceased, without distinction as to age. Thus, the case was made purely and simply one to recover the net value of the child's life—not what his services might have been worth to some one else during his minority, but what his entire life would have been worth to himself, had he lived. In other words, this action was brought just as it would have been had the one killed been of adult age. Now, suppose, says the court, that the child had survived, but as a cripple, condemned to a life of dependence, and perhaps of pain, could he not have recovered damages in a suit by his next friend. If so, could not his personal representative recover them under the statute mentioned? The court holds that he could. It declares that it sees no distinction in the law, nor reason for distinction, between the death of a child and of an adult. The measure of damages is the same, though, it is frankly admitted, the difficulty of its application is greatly increased in the case of an infant. Still, the court continues, the jury must do the best they can; taking into consideration all the circumstances surrounding the life that is lost, and relying upon their common knowledge and common sense to determine the weight and effect of the evidence. Where life is lost by reason of the actionable negligence of another, the measure of damages, it holds, is the present value of the net pecuniary worth of the life of the deceased, to be ascertained by deducting the probable cost of his own living from the probable gross income derived from his own exertions, based upon his life expectancy. The expectancy of an infant of five months, it adds, is a matter of evidence, like other circumstances of health, constitution, and habits. Then, the court says, there is another view of the question which forces itself upon its mind. This, perhaps, it was not called upon to consider; but, unless forced to do so by the overwhelming weight of authority or the inexorable logic of legal conclusion, it insists that it would be reluctant to admit that a human life, however lowly or feeble, had no value, in the contemplation of a common carrier. Even a new-born colt or calf has an actual value, entirely dependent upon its future usefulness or salability. The court also says that it is a matter of common knowledge that during the days of slavery a healthy negro child, even at the breast, was considered as worth at least $100. It then suggests that this contrast be considered. A helpless negro baby, lying upon the floor along which he could not crawl, and born to a state of hopeless bondage, was worth to the owner at least $100 as a chattel; and yet another baby, with generations of inherent qualities behind him, and the magnificent possibilities of American citizenship before him, is not worth to himself, or to the country whose destinies he might one day have shaped, even the penny necessary to carry the costs. This view the court pronounces entirely too incongruous to strike its fancy. Wherefore, it holds that the plaintiff was entitled to recover substantial damages, and affirms a judgment in his favor for $1000.

Mortality from Snake-Bites in India.—The *Cornhill* states that during the past ten years there have been 21,000 deaths from snake bites in India. For years past the government has offered a reward upon the heads of different venomous reptiles and large sums have been paid for this purpose.

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PNEUMATOPATHOLOGY.

Many pathologic conditions in various parts of the body are associated with the production of gas, even where gas is normally absent. There has been much discussion concerning such mysterious conditions by writers of the past, the problem being mostly whether the gas was atmospheric air or of putrefactive origin. With the advent of bacteriology the solution of this question, at least in some of its phases, was to be expected; and the discovery by Welch, in 1891, of the bacillus aërogenes capsulatus has already thrown much light on gaseous affections and processes. In the Shattuck Lecture, 1900, Welch[1] gives an extended review of the morbid conditions caused by this bacillus. There is no question that this organism is the one most frequently at work in cases of abnormal gas-production in the tissues; and its causative rôle is definitely established. The number of morbid conditions produced by it is large and varied, many of them of great clinical importance and heretofore poorly understood. The natural habitat of the bacillus is the intestinal canal and the soil, hence the liability to frequent infection. An important biologic property is its power to form gas from proteid materials.

In the first place it is notable that the organism may produce gas bubbles throughout the blood and the organs—"foamy organs"—within a few hours after death from the most varied causes. Formerly these cases were explained as the result of air embolism, especially in pregnant and puerperal cases. Whether the invasion of the bacilli and the development of gas are antemortem or post-mortem phenomena can not always be determined, but Welch concludes that in most cases of this sort the invasion of the bacilli occurs post-mortem or shortly before death. The bacillus aërogenes capsulatus being anaërobic, it is not likely that it multiplies in the circulating blood, but there is no valid reason against its multiplying during life in internal organs, such as the liver. Examples of the bacillus having been carried from an infected portal of entry to distant parts where necrosis and emphysema were produced have been detailed by various observers. Great care must be taken to distinguish between air embolism and gas bacillus invasion; this would generally require a careful bacteriologic examination.

"It is as a cause of that most dreaded of wound complications, emphysematous gangrene, that B. aërogenes capsulatus especially claims the interest of surgeons." Recent investigations show that most cases of emphysematous gangrene are caused by this bacillus and not by Pasteur's "vibrion septique," also called bacillus of malignant edema—Koch and Gaffky. Cases of gaseous phlegmons occur occasionally, especially in our large hospitals, but also elsewhere, and they merit study by exact bacteriologic methods in order that their etiologic relations may be cleared up fully. Welch has collected 56 cases of emphysematous gangrene associated with B. aërogenes capsulatus; the majority of these cases are American, and naturally all occurred since 1891. In all but 5, these cases followed traumatism or surgical operation, the infection generally occurring from without; in a few cases it undoubtedly came from the intestine. Mixed infection is common in this series, but the disease is really sui generis. Death occurred in 59.5 per cent., being caused probably by a toxemia. There is no proof that gaseous embolism may cause death in cases of this sort. It is of great importance that an early diagnosis be made so that radical measures may be instituted in time.

Important uterine infections may result from B. aërogenes capsulatus. Welch considers separately emphysema of the fetus, puerperal endometritis, physometra, emphysema of the uterine wall, and puerperal gas sepsis. There can be no question that many, if not most, cases reported as death from air embolism following abortion and labor are instances of invasion with Welch's bacillus from the uterus.

The urinary tract may become infected with the gas bacillus, which may then spread into adjacent tissues and into the circulation. Gas may be free in the cavity of the bladder, the ureters or renal pelvis, or contained in submucous blebs.

Another starting-point of invasions of B. aërogenes capsulatus is the gastrointestinal canal, which frequently, if not constantly, harbors the bacillus; hence the intestine is the most frequent source of the bacilli in the gaseous blood and foamy organs found at autopsies. There may also be local gastrointestinal lesions with or without gas cysts. Pneumoperitonitis with or without perforation occurs, and the gas bacillus may invade the bile-ducts and gall-bladder, especially in the case of diseases of and operation on these structures. Gas cysts of the genitourinary, gastrointestinal and biliary tracts, submucous and otherwise, due to the gas bacillus, constitute an interesting series of lesions. Levy has demonstrated B. aërogenes capsulatus as a cause of pneumothorax with perforation, and similar cases are referred to by other writers. Gwynn found Welch's bacillus in the blood during life, and Welch expresses the suspicion that Achalme's anaërobic bacillus found in acute articular rheumatism is identical with the gas bacillus. Howard and others have found the gas bacillus in pure culture in meningeal exudates, thus bringing further

1 Boston Med. and Surg. Journal, July 26, 1900; also Johns Hopkins Hospital Bulletin, Sept., 1900.

evidence of the pyogenic powers of the organism; and the bacillus may also cause cavities in the brain—Reuling and Hering[2], Howard.

From this imperfect enumeration of the various lesions considered by Welch and caused by the bacillus aërogenes capsulatus, it is seen that pneumatopathology at present is dominated by this organism, a knowledge of whose characters and properties is essential for a full understanding of many important processes. Although described fully in 1891 and since made the subject of numerous papers in American journals, knowledge of the gas bacillus of Welch has been very slow in reaching workers in other lands; and throughout his lecture Welch repeatedly calls our attention to the erroneous conclusions and incorrect statements made by French and German writers on account of their ignorance of American publications.

THE RELATIONS OF SCIENTISTS TO NEWSPAPERS.

The deep-seated feeling in the medical profession against the newspaper as a purveyor of information concerning medical matters and the doings of medical men in general rests on the knowledge that in the majority of cases the motive underlying such publications is of a largely selfish and commercial nature, subversive of the true interests of medical science. Unfortunately, the newspaper does not consider the question in the same light. Its chief aim is to give publicity to anything that its editor thinks may please the omnivorous public. Knowing that the general run of its readers are incompetent to discriminate between genuine achievements and pure bluff and braggadocio, the inquisitorial reporter—than whom there is no greater heresiographer—is detailed to interview alike the true man of science and the mountebank. Rocky Mountain goat's lymph, wonderful operations, and studies in chemical and other forms of artificial fertilization are heralded in display type and in the same sensational manner, so that it appears as if seekers of cheap notoriety had secured a foothold even in our great universities—"quacks political; quacks scientific; academical."

Notable achievements of whatever nature, be it physical, biologic, or more exclusively medical and surgical, merit full publicity. The citizens of the community are entitled to learn of remarkable and important additions to knowledge made by men at work in their midst, perchance at institutions in which the public is and has a right to be interested. It ought to learn that progress is being made and that scientific pursuits are flourishing. Information of this sort is encouraging and stimulating; it breeds confidence in nome institutions and creates a wholesome interest in their welfare. But this information should be made public in a manner and taste befitting its scientific character and the modesty that the scientist is traditionally reputed to manifest in his own work and personality—a tradition not wholly of the past but illustrated well even at the present time and by men that for this very reason not infrequently are greatly misrepresented by the harmful activity of overzealous assistants and local press bureaus.

There is always good occasion for earnest pleas in favor of modification in the editorial management of our newspapers in respect to matters of this kind. The fundamental and far-reaching importance of truth and the wholesome effect of tasteful moderation in statement seem to be sadly neglected in the education of journalists of the present day. Clear, concise recitals of notable work in these various fields of science including medicine, shorn of all irrelevant embellishments and superlatives, carefully edited by competent persons and signed by the authors, would remove many of the serious objections that now hold against the newspaper as a medium of dissemination of scientific knowledge. But how and when are we to expect so much consideration for the right and proper on the part of a press sunk so low in commercialism that it preys on the health of its readers by accepting advertising patronage from the most shameless frauds—patent-medicine makers and quack doctors?

THE MARRIAGE OF CONSUMPTIVES.

A leading daily paper publishes what purports to be the opinions of certain noted European authorities on the question: "Should consumptives marry?" These are, naturally, unfavorable. There are few, if any, physicians who, if asked their general opinion as to the propriety of a consumptive marrying, knowing himself to be such, would care to give a favorable reply. The probabilities of good resulting to the individual, as far as his or her physical welfare is concerned, are practically *nil*, while the perils of the marriage state are very real for the husband and still more so for the wife. When, however, the question is an actual and practical one we fear there are many physicians who would feel embarrassed and would prefer to avoid the responsibility of expressing an opinion in a given case. While on the one hand we have the possibilities of direct aggravation of the disease, the dangers of communication to a healthy partner, the prospects of early bereavement and distress, and lastly the real though remote possibility of direct transmission to offspring, and the probably still greater danger of transmitting a weakened and predisposed constitution, yet we have numerous instances of marriages where none of these consequences ensued, and some where the result was an apparent betterment of conditions in all respects. It may, as Professor von Leyden is quoted as saying, be best not to be too positive and to consider that medical advice on this subject is apt to be disregarded, and if the physician insists too much he may succeed sometimes "only in fashioning a wedding gift that may turn out a cross by and by; the thought of disease lurking in the beloved husband's or wife's every caress," out of which no good can come. The question as to the actual outcome of happiness in a consumptive's marriage is one that no physician can answer positively; it may be

2 THE JOURNAL, Vol. xxxii, p. 1003.

that a favorable balance is sometimes struck, with all the apparent conditions to the contrary. This may serve us for consolation when we consider how many such marriages are constantly taking place.

Leaving aside, however, the problems that involve only the contracting parties, there still remains the very serious question of the interests of those that are to be the offspring of such unions. No one "liveth to himself or dieth to himself," and this is especially true of the married consumptive. It is customary nowadays to consider only the bacterial causes of consumption, and a certain class wedded to the idea of a hypothetical germ plasm deny that acquired characters can be transmitted, thus discrediting the possibility of the direct heredity of the disease otherwise than through actual transmission of its germs. All pathologic and clinical experience is against them; there is nothing more certain than that disease of the parent modifies the constitution of the child, often producing an actual homologous morbid heredity, as is particularly observed in insanity and some nervous and other disorders. There is a growing tendency to consider the incidence of consumption as depending more on the soil than the germ, and there is nothing more certain than that it sometimes transmits to offspring a weakness or predisposition to itself and to other constitutional diseases. If the infection were always fatal few would escape, but it is harmless to the most of us in spite of ample exposure. The popular notion of the heredity of the disease, however, is based on actual experience and observation, though it is not the disorder itself but the prepared soil for it that is transmitted. This fact adds very much to the responsibility of those who propose to advise the marriage of consumptives, and while we can have no certainty that the children of such a union will suffer for their parents' disease, we must recognize the fact that as compared with others they often enter life under a serious disadvantage. This alone should be enough to make us use our influence against the possibility of the begetting of future victims.

We have not used the words "tuberculous" or "tuberculosis" here, because they have a much wider significance and by no means so serious an import. Many people suffer or have suffered from tuberculosis in one form or another where it is a comparatively trivial affection, and in some the course of genuine pulmonary infection only shows the strength of their constitution and resisting powers. These remarks apply only to those who are the subjects of true pulmonary phthisis.

THE OCULIST AND THE OPTICIAN.

The relations that exist betwen the physician and the druggist to whom he sends his patients for prescriptions, find a parallel in the ophthalmic surgeon who directs his clients to a particular optician. The same ethical code that regulates, or should govern, the doctor and his patient equally applies to the oculist and his patient. It seems necessary to add, moreover, that the laws of the codex, to be effective, should be based on the experience of years and should stand the application of common sense. It is not enough that the professional man should accept the code of ethics as he might any other authority; it is not sufficient that these rules should be simply organic with him, as the result of their reiteration since he began the study of medicine, because he must often furnish to lay persons good and sufficient reasons; for such action, based upon them, is expected to influence the conduct of himself and others. He must lay bare the foundations of the faith that is in him.

Apart from the canons of the code, why is it that every community, after considerable experience of the various methods of regulating the business relations of physicians and druggists, has concluded that it is not only against the public policy, but inimical to the best interests of the medical profession, to pay a commission on prescriptions sent to him by the physicians? Although we commonly say that the acceptance of such a commission is objectionable because it is contrary to the code of ethics, we do so with the proviso that it is equally opposed to the dictates of the medical conscience and to the experience of everyday life.

When it is asserted by the optician that there is nothing wrong in the payment of commissions to ophthalmic surgeons who send him prescriptions for eyeglasses and spectacle lenses, the answer must be somewhat different from that which would be given to a member of our profession. One might expect the latter would accept the united experience of his confrères in all countries as a reply to such an assertion; if not, he must, in common with the laity, be asked to consider for a moment what an action of this sort implies, and what the patient who pays the bill would think of it and those who have been a party to it. Furthermore, we can not avoid the inquiry as to what effect such a transaction will have on the prescribing surgeon and the profession to which he belongs.

When the patient pays the ophthalmologist for his services and receives from him a prescription for glasses, he has a right to expect, and does expect, that the surgeon will direct him to an optician who will fill the prescription at a fair market rate and that the transaction is then entirely between the optician and himself. When a commission is paid, either the patient gets that much less in the quality of the goods or in the attention that is paid to him, or is charged just so much more than he ought to be, usually under some false pretense or other. The other alternative proposition, that the optician "divides" his profit with the oculist, is probably never true. In the end it will be found that the patient gets less for his money than he ought to, that the optician charges more than he should, and that the dubious difference is stealthily handed over to the ophthalmologist. Surely such an underhand proceeding is unworthy the practitioner of a profession like ours, and it hardly seems possible that for the sake of a few dol-

lars any right-minded man would be willing to countenance it. Beginning with a breach of confidence on the part of the physician himself, it terminates in an undignified performance that reminds one of nothing more than the storekeeper's commission to the false guide who steers the unsuspecting customer into his shop. The above comments are called forth by a "Query" on p. 783.

MEDICAL ORATORY.

We publish this week an article on "Physicians as Speakers," which can be recommended as instructive reading. The medical is the only one of the three learned professions that pays no attention to oratory, and popularly, as well as in the profession itself, the idea prevails that a physician has no need of any accomplishments in that direction. Mr. Whitford shows from a reporter's standpoint how erroneous this notion is; he makes it plain that for the physician who is to take any active part in the progress of medical science a pleasing and effective elocution is in no sense a useless accomplishment. The higher a man rises in the profession, the more essential he finds such ability; he may be eminent as an investigator, a practitioner, and a writer, and yet be seriously handicapped in comparison with men far below him in all these respects by the lack of power, of command of language, and easy and attractive delivery. A great engineer once said, when worsted in argument by those whose opinions on the subject he could not particularly respect: "There is no gift like the gift of gab." This is a rough statement of a very much more serious truth than was sarcastically implied by its utterer. It was the gift of speech that raised man above the brutes, and it is the same, even in these days of printer's ink, that still often raises man above his fellows. The medical profession may not demand, as generally as the others, oratorical accomplishments of its members, but it does call for them to a certain extent. It is not alone, however, for medical meetings, college lecturing, etc., that the physician requires a proper elocutional training; the profession is constantly coming more and more to the front as a public educator and administrator of affairs, and here the value of such training is most manifest. No medical man will be the loser for having such an accomplishment, and the world would be a gainer if more of us had it. It is well, in this regard, to see ourselves as others see us, and for this reason alone the article should be profitable to our readers.

RAILWAY SANITATION.

It is said that at least two railroads in this country propose to remodel, or at least modify, their passenger coaches on sanitary lines. The plush upholstering, elaborate dust-concealing grill and carved work, heavy carpets and curtains are to be replaced by leather, smooth woodwork, linoleum, etc. The public will probably miss some of the splendor of the old régime, but this will, we trust, be more than compensated for by the greater sense of safety they will feel from contagion. There will be more than this needed, however, to bring railway travel up to the constantly widening sanitary ideals of the present day, and these can hardly be met in full without the active co-operation of the traveling public. The common drinking-cup may be replaced, as has been suggested, by the cheap paper substitutes for individual use, and possibly individual soap and paper towels may come into use on the sleepers, but the day cars with their constantly changing inmates are a more puzzling problem. What to do with the expectorators is one question. Judges have decided that the right to spit is inherent, and if it is to be restricted receptacles must be provided. Will the railroad authorities attach a disinfected cuspidor to every seat, or will they require expectorators and smokers to herd together? This question is as important as any one that is to be considered in the sanitation of railway carriages, though there are others generally treated as more important. The spitting habit is the most common of all insanitary nuisances, and it ought to be one of the first taken in hand in the reform. A passenger can protect himself by carrying his own drinking-cup, as well as brush, towel and soap, but he would not like to be compelled to carry a cuspidor for his neighbor's use, and he can rely on it that the average expectorator will never carry one for himself. We expect, however, to see the sanitary reform progress, and it may be that it will meet this evil as well as others.

THE EVILS OF TIGHT LACING.

While it might not be easy to give a succinct definition of the "new woman," she may be described as one who has been emancipated from the bonds of tradition and has been permitted to find the place of usefulness in the world that she is capable of filling; and there is not wanting evidence that she has profited by the new opportunities thus afforded. In one respect, however, she has, as yet, failed to exhibit her independence and her strength, and that is in her continued and almost abject submission to the dictates of fashion, regardless of hygienic considerations. For instance, can anything be more conceivably dangerous than the trailing skirts with which women have so largely of late swept filthy streets, raising clouds of bacteria-laden dust, and carrying into their homes the agents of disease and death? Further, in spite of all the denunciation that has been heaped upon the practice as non-hygienic, and notwithstanding the admonition of competent authorities, the large body of women persist in the use of the corset and of unduly constricting and otherwise irrational forms of clothing. It is true, a strong counter-current has set in, and shorter and properly supported skirts, as well as other reforms in the wearing apparel of women, have been adopted, but they are not nearly so numerous and so universal as they should be. Some experimental observations made by Thiersch[1] illustrate the evils resulting from constricting clothing, and more especially the use of the corset. These consist more particularly in compression of the chest, with interference with respiration and circulation; in enfeeblement of the extensor muscles of the back, with difficulty and discomfort in maintaining the erect posture; in interference with the circulation and the nutrition in the compressed skin, as well as with the circulation in the portal system; in displacement of the intestines downward, and distortion of the liver and stomach, with digestive derangement

1 Deutsche Archiv f. Klin Med., Bd. lxvii, H. 5 u 6, s.

and dislocation of various abdominal viscera. It is not denied that under certain exceptional conditions the corset may subserve a useful purpose, as in obese and well-built and well-developed women; but under no circumstances should its use be permitted to girls during the developmental period. Reform in this direction has already begun, and it can not be too speedily carried to a successful termination.

Medical News.

THE JOURNAL IN THE LITERARY EXHIBIT AT PARIS.—We have just received the following announcement from Paris: "I have the honor to inform you that in accordance with the official announcement of awards at the Paris Exposition of 1900, a Grand Prize was bestowed upon the exhibit of United States journals, publications and periodicals, and that you are therefore entitled to use this award of Grand Prize." Signed, A. S. CAPEHART, Director of Liberal Arts and Chemical Industries.

THE MAHARAJA OF JAIPUR has given 15 lakhs of rupees, equivalent to $500,000, toward an "Indian People's Famine Trust."

DR. RUDOLF VIRCHOW'S golden wedding was celebrated August 24. One son, Dr. Hans Virchow, is professor of anatomy at the University of Berlin; another is Dr. Karl Virchow.

IT IS STATED by the *Medical Press and Circular* that Assistant-Surgeon O'Neill has been murdered by the Boers. He was out with an ambulance in search of wounded. A party of Boers came upon the ambulance, seized it, and ordered the medical officer away. They subsequently recalled and shot him.

THIRD PAN-AMERICAN MEDICAL CONGRESS.—The Southeastern Passenger Association has granted a one-fare plus two dollars rate for the round trip to Havana, Cuba, for the December meeting of the Congress. The steamship lines have granted a one-fare rate. The other passenger associations are considering the matter and are expected to grant the same rate.

DR. JOHN E. CLARK, of Detroit, has just returned from Glasgow. He says the city's calamity is great, the schools are closed, and her trade and commerce with the outside world has been closed. Every exertion possible has been made by the health authorities to guard against the spread of the plague. The "contacts" are placed under observation as soon as discovered.

IN A VALEDICTORY ADDRESS delivered by the late Dr. Jacob M. Da Costa to the graduating class of 1891 at Jefferson Medical College, he said: "A teacher will not simply instruct; he will do more, he will educate. Through his pupils he lives; the man passes away; the teacher remains in his pupils and becomes part of them. When the hour comes that I shall lay down this robe of teaching, when the time arrives that I shall address you no more, there will always remain the thought—I say it in all humility—that I shall live in you. I shall be with you in your struggles, shall share with your successes. At every bedside of distress, at every bedside of hope we meet again. The teacher is inseparably joined to you, to all his pupils. Awful, ever-present responsibility, constant excitant to truthful, arduous effort; and happy is he who has been so guided that he has never forgotten his responsibility nor relaxed his exertion; that he has used God's gift of teaching for God's purpose."

CALIFORNIA.

DR. FREDERICK REYNOLDS, of Los Angeles, late interne at the county hospital, has been appointed assistant-surgeon at the Soldiers' Home.

DR. CORNELIUS F. BUCKLEY, one of the pioneer physicians of San Francisco, was badly bruised and cut about the face and body in a runaway accident, September 3.

DR. FREDERICK W. HATCH, of Sacramento, now general superintendent of State Hospitals for the Insane, will, it is reported, be made superintendent of the Napa Asylum, to succeed Dr. A. M. Gardner, resigned.

HIGHLAND ASYLUM was found by the State Board of Health to be greatly overcrowded. It was clean and in good sanitary condition. The board recommends that a large wing be erected.

THE NEW Railroad Hospital, which has been remodeled from the old Charles Crocker residence, San Francisco, will be thoroughly equipped and ready to receive patients October 1. The old hospital will be torn down.

THE HOSPITAL STEWARDS at the Post Hospital, San Francisco, complain that they are obliged to be on duty thirty-three hours out of forty-eight. The watches are divided into stretches of fifteen and eighteen hours. The hospital is crowded and the hospital corps undermanned.

THE NEW operating wing of the Mater Misericordiæ Hospital, at Sacramento, was formally opened on September 8. The suite of rooms comprises, in addition to the operating-rooms, separate rooms for anesthesia, sterilizing, storage of dressings and dressing-rooms for operator and assistants.

THE REPORT of the Health Department of Los Angeles for August shows 131 deaths, or a death-rate of 15.26 per 1000. The causes of death were: Specific infectious diseases, 18; respiratory diseases, including 18 from tuberculosis, 32; digestive diseases, 17; nervous diseases, 15; circulatory diseases, 12; genito-urinary diseases, 10; violence, 9. The deaths included 80 males and 51 females. During the month 154 births were reported. The contagious diseases reported numbered 38—diphtheria, 12; scarlet fever, 11, and typhoid fever, 15.

COLORADO.

GROSS MEDICAL COLLEGE, Denver, opened its twelfth annual session, September 12. Addresses were made by Professors Charles B. Van Zant, George E. Tyler and other members of the trustees and faculty.

THE AUGUST MORTALITY of Denver was 223—128 males and 95 females. Tuberculosis caused 37 deaths; typhoid fever, 9; scarlet fever, 2; diphtheria, 1; pneumonia, 10; cholera infantum, 14, and violence, 13.

CONNECTICUT.

DR. JOSEPH E. ROOT, of Hartford, has returned from a two months' trip to Europe.

DR. VICTOR S. MERRITT, of Hartford, has bought the practice and property of Dr. Jackson, of Haydenville, Mass.

THE STATE BOARD OF HEALTH report shows that there were 1642 deaths during the month of August. This was 59 more than in July, 260 more than in August of last year and 298 more than the average number of deaths in August for the five years preceding. The death-rate was 31.9 per 1000 for the large towns; for the small towns, 21.1, and for the whole state, 21.7. The deaths reported from infectious diseases were 612, being 37.3 per cent. of the total mortality. The prevalence and mortality of measles, scarlet fever, diphtheria and whooping cough are greatly abated, as compared with the preceding months of the year, but typhoid fever and acute intestinal affections have increased. The typhoid excess is probably due in part to the low elevation of the wells. Other diseases have not varied so conspicuously from their usual prevalence. Typhoid fever is reported as occurring during August in 56 towns in the state, with a mortality of 36, against 21 in August of last year. Several of the patients are reported as taken ill soon after vacations spent away from home. It would be very instructive and profitable if all the reports of typhoid cases

indicated whether contracted at home or elsewhere. About a year ago it was stated that a large proportion of the victims of infectious diseases are among those who have been visitors at the different summer resorts in this or neighboring states. The same observation is likely to be realized this autumn, especially in the occurrence of typhoid fever. The unusual high temperature during August has operated with fatal effect on infantile life. Over 43 per cent. of the total deaths were of children under 5 years old. These deaths were, in the majority of instances, caused by diarrheal disorders and induced mostly by food rendered unwholesome by the changes produced in it by heat. Nursing babies and babies well fed on wholesome, unspoiled food do not suffer from hot weather more than adults.

DISTRICT OF COLUMBIA.

DR. D. PERCY HICKLING, of Washington, has returned from his European trip.

THE FOLLOWING general order was issued by the War Department September 10: The Army Medical School is governed by special regulations, and will have the following organization: The faculty will consist of four or more professors, selected from the senior officers of the Medical Department stationed in or near the city of Washington, and such associate professors as may be required. The senior officer will be president and the junior secretary of the faculty. The student officers will be selected by the Surgeon-General from those medical officers who have been appointed since the last preceding term of the school, and such others as may be authorized to attend.

FLORIDA.

DR. MARTIN KENNEDY, of Bartow, will locate in Pensacola.

ILLINOIS.

DR. JOSIAH C. TAYLOR, of Hull, has moved to Rich Hill, Mo.

DR. PAUL DOMBROWSKI, of Peoria, has returned from Paris.

DR. ROY W. RIGGS, of Winchester, has moved to Newark, S. D.

DR. ALVA C. FOSTER has moved from Blue Mound to Columbia, Mo.

DR. CHARLES A. HANDLEY'S office, at Isabel, Edgar County, was destroyed by fire September 2. He lost his library, instruments, medicines, etc., his loss being more than $1000.

DR. JAMES O. DECOURCY, assistant city physician of East St. Louis, resigned his position September 11, because, when he protested against the reduction of his bill for $500 for treating smallpox patients to $250, the board of supervisors still further reduced his bill to $100.

Chicago.

DR. JACOB FRANK returned, on September 15, from his summer in Europe.

DR. WILLIAM L. BALLINGER is lying dangerously ill at the Evanston hospital.

DR. ROBERT D. BOYD has returned after a vacation of a month spent on the Great Lakes.

DR. AND MRS. JULIAN E. HEQUEMBOURG have returned after a summer vacation at the seashore.

DR. J. M. WASHBURNE was married to Miss Margaret Price, of Buckhart Township, September 2.

DR. ROBERT C. WILSON has returned from Lake Harbor, Mich., where he spent July and August.

DR. AND MRS. GEORGE F. FISKE have returned from a two months' stay in Colorado, and sail for Europe to-day.

DR. CYRENIUS A. DAVID, who has been spending several months in Europe, returned to the city on September 5.

DR. AND MRS. J. ELLIOTT COLBURN have returned from their trip to Europe. After visiting the Paris Exposition they took a 500-mile bicycle trip through southern England and Wales.

DR. OTTO H. PAGELSON, who has recently completed his internship at Cook County Hospital, has located in Iowa Falls, Iowa, where he will be associated with Dr. Melvin W. Hill.

DR. LEO LOEB, of the University of Chicago, has returned from his sojourn at Woods Holl, Mass., where he has been experimenting on the development of life from unfertilized eggs.

DR. FRANK BILLINGS, who has spent the last two months at Mackinac, for rest and recuperation, has returned. He was ill with malarial fever for several weeks, but has entirely recovered.

DR. JOSEPH HAVEN, United States consul at St. Christopher, West Indies, has been spending a few days in Chicago. He has recovered his health and expects to return to his practice in Chicago early in the spring.

IN MEMORY of Dr. Ernst Schmidt, the trustees of the Michael Reese Hospital have adopted resolutions, setting forth his service as surgeon to the hospital for twenty years, extending the condolence of the officers and trustees to the family and inscribing his name on the hospital roll of honor.

THE COLLEGE OF PHYSICIANS AND SURGEONS will open on October 1 with an estimated total enrollment of 700. In addition to the faculty changes already noted, the following appointments have been made: Dr. Harris E. Santee, professor of anatomy; Dr. John L. Porter, professor of orthopedic surgery; Dr. Joseph M. Patton, professor of physical diagnosis; Dr. Daniel N. Eisendrath, professor of clinical anatomy; Dr. Don L. Shaw, professor of anatomy; Dr. Julius H. Hoelscher, professor of clinical medicine; Dr. Bernard Fantus, adjunct professor of materia medica; Dr. August F. Lemke, adjunct professor of practice of medicine; Dr. Edward H. Lee, adjunct professor of practice of surgery; Dr. James M. Neff, adjunct professor of practice of medicine; Dr. Aristides E. Baldwin, adjunct professor of stomatology; Dr. Eugene R. Whitmore, adjunct professor of chemistry; Dr. Samuel J. Walker, adjunct professor of clinical anatomy and instructor in surgery; Drs. Edward F. Wells, William K. Jaques, and James W. Walker, adjunct professors of practice of medicine; Dr. Leo Loeb, assistant professor of pathology; Dr. William H. Rumpf, instructor of gynecology.

HEALTH DEPARTMENT.

Recent heat and humidity are responsible for the increased mortality from the acute and intestinal diseases. For more than two weeks there has been an almost epidemic prevalence of these ailments, but not until last week did this show an increased number of the diarrheal deaths—116 as against 94 the week previous and 85 during the corresponding week of 1899. Notwithstanding the increase from this cause, the total mortality from all causes numbers only six more than for the first week of the months and the death-rate for the last fortnight is only 13.75 per thousand of the Federal figures of population—1,698,575. The interrupted flow of the drainage channel has had no effect on the sanitary quality of the public water-supply as determined by chemical examination, and the increase of typhoid fever must be due to some other cause—probably the usual seasonal increase. The increase is not great enough to cause alarm, while the comparison with the period before the drainage channel was opened still continues favorable. During the first fortnight of September, 1899, there were 25 typhoid deaths, and during the same period this year there were but 17 deaths from this cause. The mortality for the week ended September 16, was 450, an increase of 59 over that of the corresponding week in 1899, the respective death-rates per thousand being 13.81 and 12.71. Of males 236, and of females 214 died. Under 1 year of age, 120 deaths occurred; between 1 and 5 years, 67; and the same number over 60 years of age. The principal causes of death were: Acute intestinal diseases, 116; consumption, 40; cancer, 35; heart disease, 31; nervous diseases, 28; violence, 21; Bright's disease, 15; pneumonia, 14; apoplexy, 11; typhoid fever, 10; diphtheria, 7, and suicide, 7. During the week 66 cases of contagious disease were reported—scarlet fever, 28; diphtheria, 37; whooping-cough, 1; typhoid fever, 13. At the stockyards 62,202 pounds of meat were condemned. Of the 454 samples of milk and cream analyzed, 9.03 per cent. were found to be below grade.

INDIANA.

DR. F. BLAIR HUMPHREYS has moved from Fremont to Angola.

DR. MINOR MORRIS, of Indianapolis, has moved to Washington, D. C.

DR. GEORGE H. GRANT, of Richmond, health officer of Wayne County, is very ill with typhoid fever.

DR. S. C. MARKLEY, of Richmond, was elected city physician and police surgeon of Richmond, September 4.

DR. AUSTIN FUNK, of New Albany, has been appointed on the staff of the United States Marine-Hospital at Cairo, Ill.

DR. CHARLES A. ROSS, of Leopold, has been appointed acting assistant-surgeon in the army, and has started for his post of duty in China.

DR. WILLIAM D. SCHWARTZ, of Portland, has sailed for Europe. He intends to pursue his studies in the hospitals of London and Paris.

ST. MARGARET'S HOSPITAL, Hammond, has organized its staff as follows: Dr. Cyrus W. Campbell, president; Dr. James T. Clark, vice-president; Dr. H. Edgar Sharrer, secretary. The hospital will be ready to receive patients in a few days.

THE BOARD OF HEALTH of Logansport announces that, in view of the existence of smallpox in the city, and of the order for compulsory vaccination recently promulgated by the board, it will vaccinate free of charge all school children whose parents are unable to pay for vaccination.

MARION has a strong anti-vaccination party, which has formed a society whose members have agreed to send their children to school in defiance of the compulsory vaccination orders, and if not allowed to enter the matter will be taken to the courts.

THE NEW STATE LAW, which goes into effect this fall, provides that first-year students who do not possess a literary degree, a diploma from a high school, or a teacher's life certificate must pass an entrance examination before a representative of the State Board of Medical Registration, who must not be in any way connected with any medical college.

DR. JOSEPH G. ROGERS, superintendent of the Northern Insane Hospital, at Logansport, saved the state a large sum by preparing the plans for the two new buildings erected this summer and superintending their construction. The trustees have granted him a vote of thanks for an honorarium, and have increased it by sending a copy of the resolutions to the governor.

INDIAN TERRITORY.

DR. FRANKLIN M. DUCKWORTH has been appointed pension examining-surgeon at Claramore in the Cherokee nation.

DR. CHARLES F. MCELRAITH, formerly of Enid, has been appointed superintendent of the Canadian County Board of Health vice Dr. William J. Muzzy, of El Reno, resigned.

IOWA.

DR. ALBERT E. RECTOR, of Lake Park, has moved to Spirit Lake.

DR. CALEB P. SOPER, of Spirit Lake, has moved to Warrensburg, N. Y.

DR. J. W. COKENOWER, of Des Moines, has returned from his European trip.

DRS. EGERTON J. AND NELLIE M. UNGER, of Mount Union, have located permanently in Keokuk.

DR. BENJAMIN F. ANDREWS has given up the practice of medicine in Oskaloosa, and will enter the missionary field.

KANSAS.

DRS. WILLIS H. AND IDA A. HALL, formerly of Topeka, have opened offices at Rock.

DR. WILLIAM M. ARNOLD, of Larnech, has been appointed coroner of Pawnee county.

THE KANSAS MEDICAL COLLEGE, Topeka, opened September 11. The attendance promises to exceed that of any previous year.

DR. A. W. SCHOCKLEY, acting asst.-surgeon, U. S. A., son of Major W. B. Schockley, of the Soldiers' Home, Leavenworth, has been made superintendent in charge of inspectors of sanitary work at Havana.

KENTUCKY.

DR. JAMES T. BLACKBURN has been nominated trustee for the Twelfth ward, Louisville.

DR. THEODORE N. WISE, one of the most highly esteemed physicians and citizens of Covington, is critically ill at his home.

DR. ABRAHAM S. STANLEY, late of the house staff of the Western Kentucky Hospital for the Insane, has decided to remain in Hopkinsville and go into private practice.

LOUISIANA.

MONROE has elected a new board of health, consisting of Drs. Charles W. Hilton, Addley H. Gladden, and M. A. McHenry.

A PLAN for a proposed isolation hospital, which is urgently needed at New Orleans, has been approved and the city council is to be asked to authorize its construction forthwith. The plan, which was prepared by Dr. Sidney L. Theard, secretary and treasurer of the city board of health, contemplates a hospital on the pavilion plan.

DR. QUITMAN KOHNKE, president of the New Orleans Board of Health, presented at the September 10 meeting a map showing the location of the 467 dairies which do business in the city. He also commented upon the decreased mortality of the city and stated that the death-rate for August was lower than for any August in the preceding five years.

MAINE.

DS. L. S. PURRINGTON has opened an office in Gray.

DR. N. E. NICHOLS will locate for practice in Jackman.

DR. AUGUSTUS B. DRUMMOND, of Bangor, has gone to Rockland, where he will locate for practice.

DR. B. F. PEABODY has purchased the practice of Dr. Erving A. Libby, of Rangeley, and will locate there.

THE CONTRACT for the masonry of the new Sisters of Charity Hospital, Lewiston, has been awarded, the bid being $28,490. The wood construction of the building has been contracted for at $39,171.

MARYLAND.

TYPHOID FEVER is unusually prevalent in Carroll County, especially near Westminster.

THE DEATH of Mr. Henry C. Hallowell, of Montgomery County, removes probably the foremost sanitarian outside of the profession. For sixteen years he held the position of president of the board of health of Olney district, and by his untiring devotion to its interests, wise foresight and courtesy in carrying out the decisions of the board, he not only assisted materially in keeping alive voluntary sanitary association, but made it respected, appreciated and obeyed, by the general public, without opposition.

Baltimore.

DR. G. MILTON LINTHICUM is visiting the Paris Exposition.

THE WILL of Mayor A. Nusbaum bequeaths $100 to the Hebrew Hospital.

THE MARYLAND MEDICAL COLLEGE opened September 17 with an introductory address by Prof. Richard L. McNeer.

FOR THE WEEK ended September 8, there were 75 deaths among children under 5 years of age. There were 23 deaths from cholera infantum, 14 from dysentery, 4 from typhoid fever, and 29 from consumption.

THE DRINKING WATER used in the school is the subject of much discussion. Owing to the prevalence of typhoid fever, the health commissioner has warned the citizens to boil all drinking water, yet no precautions are taken in the public schools, where the children drink out of open buckets exposed at all times, using a common tin cup.

THE SURGEON-GENERAL of the Marine-Hospital Service has asked the health commissioner to secure the aid of the steamship companies in preventing the introduction of the bubonic plague, as has been done by the authorities of New York. Dr. Wyman desires the ship's surgeon to take the temperature and make examinations of the crew and steerage passengers twenty-four hours before the vessel reaches port, and keep a record of the same for the guidance of quarantine officers.

THE HEALTH COMMISSIONER calls attention to the great prevalence of typhoid fever in Baltimore. In August, 1899, 74 cases were reported, with 25 deaths; in August 1900, 189 cases were reported, with 37 deaths. The increase in cases reported and the lessened death-rate are believed to be due to a more strict compliance by physicians with the law compelling the report of typhoid cases to the department. It is not thought that there was such a large increase of cases as is shown in the figures. Formerly it was considered that the disease was limited chiefly to elderly people; now many children are found to be suffering with it. The following figures show the mortality in Baltimore from typhoid fever in the last ten years. Total deaths, 1928; 1890, 247; 1891, 150; 1892, 193; 1893, 224; 1894, 222; 1895, 173; 1896, 188; 1897, 189; 1898, 189; 1899, 153.

MICHIGAN.

DR. WILLIAM M. HARVEY, of Detroit, sailed for Europe, September 8. He will study in Berlin.

PETOSKEY has raised nearly $5000 for a hospital and expects to have the foundations laid before winter.

THE STATE LAW may be tested in the case of Miss Heideman, of Calumet, who came from Finland four months ago, and claims to have a diploma in medicine from the University of Helsingfors. She has been practicing in Calumet, but has taken no examination on account of her ignorance of English.

THE BAY CITY Board of Health, on September 7, adopted the following resolution: "Resolved, That the board of health does hereby most respectfully ask that the physicians of Bay City shall always inspect a case of contagious disease before asking the health officer to remove the sign or disinfect the house, and that the health officer, before removing the sign, ascertain whether the physician has carried out the import of this resolution." The necessity for this action is that frequently the attending physician in a contagious disease case will order the warning sign removed from the house before the danger period has passed.

MORTALITY FOR AUGUST.

There were 2954 deaths in Michigan reported to the department of state during August. This number corresponds to a death-rate of 14.5 per thousand, as compared with a rate of 12.4 for the preceding month, and a rate of 13.8 for August, 1899. The mortality of the State of Indiana for August was 14.3 per thousand, or practically the same as that of Michigan. The number of deaths returned for August is 455 more than for July. There were 811 deaths of infants under 1 year of age, an increase of 250 over July; 268 deaths of children aged 1 to 4 years inclusive; and 630 deaths of persons aged 65 years and over. Important causes of death were as follows: Pulmonary tuberculosis, 122; other forms of tuberculosis, 51; typhoid fever, 68; diphtheria and croup, 19; measles, 6; whooping cough 17; scarlet fever, 15; pneumonia, 80; diarrheal diseases of infants under five years, 586; cerebrospinal meningitis, 37; cancer, 121; accidents and violence, 187. As compared with the preceding month, a slight increase is noted in the number of deaths from diphtheria and croup, a considerable increase in the fatality of typhoid fever, and a large increase—308 deaths—in the mortality from diarrheal diseases of children. This latter increase is characteristic of the annual "slaughter of the innocents," chiefly from "cholera infantum," a type of disease which is entirely or largely preventable by proper sanitary and hygienic methods.

MINNESOTA.

COUNTY PHYSICIAN ANCKER has named Dr. James S. Gilfillan, of St. Paul, as assistant county physician.

MAJOR THOMAS C. CLARK, M.D., of Stillwater, was married at Decorah, Iowa, to Miss Mary I. Breckenridge, on Sept. 11.

THE FOUNDATIONS of Asbury Hospital, Minneapolis, will be completed by October 1, at a cost of $10,000, which is already in hand. The directors already have $25,000 of the $50,000 required to complete the building.

THE HOSPITAL COMMITTEE of the Board of Charities and Corrections has been notified that $23,000 of the $30,000 required have been raised toward the quarantine station at St. Louis Park, and the cottages for the Minneapolis City Hospital.

DR. GUSTAV A. RENZ, as president of the Ramsey County Medical Society, has filed charges against four physicians in St. Paul, that they advertise fictitious cures. The accused are cited to appear before the State Board of Medical Examiners, on October 11.

MISSOURI.

DR. WILLIAM E. CASS, of St. Louis, acting assistant-surgeon in the army, has been ordered to report for duty to the chief surgeon at San Francisco.

THE BOARD OF MANAGERS of the State Insane Asylum at Nevada has re-elected Dr. Joseph F. Robinson superintendent of the asylum for four years.

DR. ALBERT STEINRAUF, of St. Charles, has been notified of his appointment as acting assistant-surgeon in the army, and has received orders to report at San Francisco for assignment to duty.

DR. I. N. LOVE, of St. Louis, has removed to New York City to engage in the practice of his profession. He has accepted a position in the department of internal medicine and diagnosis in the Post-Graduate Medical School and Hospital. His address is Hotel Iroquois, 49 West Forty-fourth street.

THE DEATH-RATE of Kansas City is increasing. In 1899 it was 10.9 per thousand, and in 1889, 13.6. During 1899 2662 deaths occurred, 1752 adults and 910 children. Of these 507 were under 1 year of age. Violence was the cause of 128 deaths. The maximum of deaths occurred in April, 313, and the minimum, 157, in November.

MONTANA.

DR. WILLIAM H. CAMPBELL, of Livingston, has moved to Kalispell.

DR. JOSIAH R. HAMMOND, of Butte, will return from Europe and resume practice early in October.

DR. BENJAMIN C. BROOKE, of Helena, was so unfortunate as to step into an open hatchway in Butte on August 30, while in attendance on the meeting of the Interstate Medical Association. He fell eight feet and broke three ribs.

NEBRASKA.

DR. AUGUST F. JONAS, of Omaha, has returned recently from the International Medical Congress.

DR. FRED W. LESTER, who left David City for his old home in Illinois, has returned to David City and resumed practice.

DR. JAY RYAN, a recent graduate of Creighton Medical College, has been appointed physician for the poor of Douglas County.

DR. VICTOR H. COFFMAN, of Omaha, has been forced to spend some time in the mountains on account of illness. He has returned much improved.

THE GOVERNOR has been formally requested by the Omaha Medical Society to reappoint Dr. Benjamin F. Crummer, of Omaha, on the State Board of Health.

NEW JERSEY.

DR. GRANT SPARKS has been elected physician to the Gloucester County Almshouse.

DR. WILLIAM S. JONES, of Camden, has been re-elected county physician for a term of three years.

DR. ROLLAND TOMLINSON, of Plainfield, is now associated in practice with his father, Dr. T. H. Tomlinson.

THE BUDGET for Atlantic City has been issued for the coming year, and among other items approved by the council are improvements for hospital, $10,000; sanitary improvements, $24,500.

THE SANITARY CONDITION of Atlantic City at the present time is said to be bad, and this is especially due to the defective sewerage system and the lack of attention from the board of health.

NEW YORK.

DR. C. C. LYTLE has located for practice in Syracuse.

DR. RICHARD ELLIS, of Utica, has moved to New York and opened an office at 147 East Twenty-first street.

DR. EDMUND C. BODY, city physician of Rochester, was married on September 4, to Miss Jessie Cameron Cogswell, also of Rochester.

DR. CHARLES E. WHITE, of Waterville, has moved to Rome, where, with his wife, who is also a physician, he will continue in practice.

DR. J. D. SHIPMAN, who, after his graduation, studied for a year in Germany, and then served for another year as house physician at St. Joseph's Hospital, Syracuse, has located at Amsterdam.

THE HEALTH REPORT of Rochester for August shows 220 deaths, 269 births and 111 marriages for the month. The death-rate was 15.94 per thousand, based on the census figures of 162,435. Of the decedents 54 were under 1 year of age; 14 between 1 and 5 years, and 82 over 60 years. The chief causes of death were: Contagious diseases, 25; cholera infantum, 22; apoplexy, 16; dysentery, 13; heart disease, 19; violence, 13. There were 17 more deaths than in August, 1899.

ST. PETER'S HOSPITAL STAFF, at Albany, was reorganized September 3, and the following physicians chosen: Consulting surgeon, Dr. Patrick J. Keegan; consulting physician, Dr. T. Kirkland Perry; attending physicians, Drs. Henry Hun, Howard Van Rensselaer, Andrew MacFarlane; attending surgeons, Drs. Samuel R. Morrow, William Hailes, Jr., John V. Hennessey; ophthalmic surgeons, Drs. George S. Munson, Theodore F. C. Van Allen; abdominal surgeon and gynecologist, Dr. John B. Harvie; nose and throat, Dr. Clement F. Theisen; obstetrician, Dr. John F. Reilly, of Rensselaer; pathologist, Dr. George Blumer; house staff; physician, Dr. Waldron A. Stearns; surgeon, Dr. W. Gansevoort Mack.

Buffalo.

DR. LUCIEN HOWE is in Europe.

MAJOR CHARLES K. WINNE has been detailed as post-surgeon at Fort Porter.

DR. ROSWELL PARK has been appointed medical director of the Pan-American Exposition. With the appointment of one so distinguished in his profession, this department of the exposition should respond to all demands made upon it.

THE ORDINANCE controlling the grain-drying industry has been passed by the city council. This will afford a great relief to the city because at times the stench arising from the wet, fermenting grain has been almost unendurable. Many cases of disease were caused and aggravated by this nuisance.

THE CONSUMPTION HOSPITAL, a building erected especially for tuberculous patients, which was recently totally destroyed by fire, is soon to be rebuilt. It will be situated on the outskirts of the city, on high and dry grounds, and being a department of the Erie County Hospital it has the advantage of a fine herd and many acres of good farm land. The hospital did and will do exceedingly good work in this field, because as a rule the patients coming to it are from the lower strata of life, very poor and ignorant. They, therefore, are not only benefited themselves by their hygienic environment and good treatment, but their relatives are protected by their separation from an aggravating source of infection.

DR. JACOB OTTO has been appointed assistant-superintendent of the Exhibit on Sanitation, with the collaboration of the health commission. He has addressed a circular letter to every health board in North and South America asking for its co-operation. The exhibits will be classed under two heads, the first, covering the proceedings pursued by the different boards of health in all matters pertaining to sanitation. This exhibit will be composed of the blank forms used by each board of health and of photographs of their public works devoted to sanitation, and of models of special features in municipal sanitation used in chemical and bacteriological work and disinfection. Models will be presented graphically illustrating the contamination of wells, practical tenement houses in comparison with insanitary rookeries. The second section will show the sanitary appliances used in disinfection, ventilation and heating, and will include models of plants in use by municipalities for supplying water, for the disposal of sewage, garbage, etc.

New York City.

DR. LUCY M. HALL-BROWN, of Brooklyn, has returned after a two-months' trip to Europe.

DR. HENRY E. HALE, JR., was married September 12, to Miss Frances Hibbard Ward, of Chicago.

DR. CHARLES F. MEINHARDT, of St. Mark's Hospital, is spending his vacation in Duluth, Minn.

DR. GEORGE F. SHRADY has returned after a short trip to Europe. While there he went to Glasgow to look over the plague situation.

ONE OF the New York hospitals has in operation a camera which records minutely, after the manner of a biograph, the actions of patients. These are reproduced on a screen, and physicians and students thereby enabled to study closely the manifestations of such diseases as locomotor ataxia, etc.

MICHAEL C. MURPHY, president of the health department, has given out plans for the new bacteriological laboratory to be constructed especially for the study of the bubonic plague germs. It will be erected near the Willard Parker Hospital, on East Sixteenth street, will be built of steel, with asbestos walls, and will have neither chimney nor windows.

THE DEATH is announced of Samuel Bradhurst Schieffelin at his home in New York City, aged 89 years. On the retirement of his father from business in 1849, Mr. Schieffelin and his brother managed the extensive drug business of Schieffelin & Co. He remained at the head of the company until 1865, when he was succeeded by his son. Since his retirement, he devoted himself to historical and religious study and writing.

OHIO.

THE NEW pathological laboratory at Charity Hospital, Cleveland, is now completed and ready for opening.

DR. JAMES E. MURRAY, of Middletown, has disposed of his practice to Dr. L. S. Krauss, of West Carrollton.

THE FALL TERM of the Ohio Medical College, and Starling Medical College, at Columbus, opened September 12.

DR. ALBERT F. SHIELEY, of Glandorf, who has been studying in Germany for several months, has returned and will locate in Ottawa.

DR. B. P. HALL, of Richwood, has been awarded the care of the sick and the furnishing of medicines to the poor of Claiborne township.

DR. GEORGE W. CRILE, of Cleveland, has been appointed to the chair of clinical surgery in the medical department of Western Reserve University.

THE FIRST FINE under the Love medical law was imposed in Fulton county, when Dr. Pixley, a physician from Michigan, was arrested and fined $27 and costs.

THE FIRST EXAMINATION under the Love medical law was held at Columbus, by the State Board of Medical Registration and Examination, September 9, 10 and 11. Nine applicants, all medical graduates, took the examination.

PENNSYLVANIA.

THE SCHOOL BOARD of Caernarvon has instituted the use of individual drinking cups for its school children.

DR. ROBERT W. BRACE, of Blackwood, has been appointed resident physician at the hospital in Westport, Conn.

A MILD epidemic of diphtheria now prevails in Carlisle. Fourteen cases have been quarantined by the board of health and four new cases have appeared.

DR. THOMAS S. ANDERSON and wife, of Carnegie, will soon leave for a six-months' sojourn in Europe. On their return they expect to locate in East End, Pittsburg.

ANTHRAX has attacked the herd of cattle belonging to William J. Irvin at Centreton, near Woodstown, and 5 out of 10 cattle have died. The state veterinarian now has matters in charge, and is affording protection.

THE WATER BOARD of the city council of Reading, in its recent report, recommends filtration of the water-supply from Antietam dam. On account of vegetable growth this source of water-supply is frequently rendered useless for weeks at a time.

THE BUSINESS MEN of Erie have demanded of the board of health and city council that a municipal hospital be built forthwith. There are now ten cases of smallpox in the city, and no efforts should be spared to limit and stamp out the disease.

COMPULSORY EDUCATION AND VACCINATION IN BRADFORD COUNTY.—On September 3, Judge Fanning, of the court of quarter sessions of Towanda, Bradford County, filed an opinion in the case of the Commonwealth vs. E. L. Smith, in which the compulsory vaccination and the compulsory education laws were brought into question. The case was one in which Smith, who is a christian scientist, declined to have his son vaccinated and the boy was refused admission to the public schools. He subsequently received instruction at his home from his mother. Smith was fined $2 for non-attendance at school. The judge, in his ruling, stated: "We must conclude from the foregoing that the compulsory education act by its terms did not make it obligatory upon the defendant to obtain a certificate of vaccination. His sole duty prescribed by it was to send his son to school. He did this. The teacher refused the son admission simply because he did not present a certificate. There is nothing in this statute making vaccination mandatory in any case. Neither does it require the child to produce a certificate that it has been successfuly vaccinated or had smallpox. In order to sustain this judgment we must say that the defendant was obliged by the terms of the statute to procure and his son to present a certificate. We can not say this. The defendant made a clear answer to the case of the Commonwealth when he showed that he had sent his son to school until he was denied admission by the teacher. This is a question of the extent of the police powers of the legislature. Perhaps a law making vaccination obligatory in all cases except where the child has had smallpox would be a valid exercise of that power. This is unnecessary to decide. For so far the legislature has not expressly enacted such a law, and we do not feel disposed to hold that it has done so implicitly in order to sustain this judgment."

Philadelphia.

DR. ANDREW J. DOWNES has returned from Europe..

DR. W. BARTON HOPKINS is spending a vacation at Newport.

DR. E. E. MONTGOMERY has returned from his European trip.

DR. JAMES M. ANDERS has returned from his visit to Dr. L. Webster Fox at Kennebunk, Me.

A BEQUEST of $10,000 has been made to the Pennsylvania Hospital by Howard Roberts, who recently died in Paris.

THE HOME FOR THE HOMELESS, at 4102 Ogden street, will hereafter be under the management of Dr. Rebecca Moore, assisted by a board of advisers.

MAGISTRATE KOCHERSPERGER a few days ago fined a wagon-driver $5 for delaying the ambulance of the German Hospital while it was making a call to receive a patient.

THE BOARD OF HEALTH censured an eclectic physician for not reporting a death from diphtheria promptly, and for allowing the body of the patient to remain near an open window for a day after death.

THE SANATORIUM ASSOCIATION has completed its twenty-fourth year, and the results show the largest increase over any previous year. The admissions for 73 working days were 180,670 adults and children, comprising 25,655 adults, 20,516 infants, 134,499 children over 2 years of age. Of bathers there were 23,265 boys, 25,591 girls and 4516 infants.

THE JEWISH MATERNITY ASSOCIATION has asked an amendment to its charter, and within a short time will make an addition to its equipment by erecting a gynecological ward and operating room. A benefit concert will be given at the Academy of Music, the proceeds of which will be given to the home.

TENNESSEE.

THE CITY HOSPITAL at North Knoxville is nearly completed. It is expected that it will be furnished and equipped to receive patients by January 1.

THE NEW BUILDING of the Tennessee Medical College, at Knoxville, will be ready for occupancy before the opening of the college term in October.

DR. D. M. SAUNDERS, of Woodstock, has been elected superintendent of the Shelby County Emergency Hospital at Memphis.

THE MEMPHIS BOARD OF HEALTH has been notified by several southern cities that if the Memphis city council passes the amendment to the health ordinance offered at a recent meeting, which will require that the physicians of Memphis report all of their cases of tuberculosis and typhoid fever, they will follow suit and adopt a similar ordinance.

TEXAS.

MERCY HOSPITAL has been incorporated at Laredo, without capital stock, but with property valued at $6,000.

DR. E. E. MANSFIELD, of Wilmer, has been assigned to the Twenty-fifth U. S. Infantry as assistant-surgeon, and has left for San Antonio to join his regiment.

Galveston.

DR. HAMILTON A. WEST, whose death was announced by the Associated Press as having occurred in the recent tornado, has asked THE JOURNAL to state that he and his family are safe and well. Dr. West is actively at work with the Board of Health restoring order from chaos.

DR. C. P. WERTENBAKER, United States Marine-Hospital Service, stationed at New Orleans, has been ordered to Galveston. His instructions are to make an immediate investigation and estimate of the damage done, and the general condition of the inhabitants, and to keep the authorities in Washington in close touch with the situation.

THE HEROISM of Dr. I. M. Cline, United States Weather Observer at Galveston, a member of the Texas State Medical Association, stands out brightly among the many heroic deeds recorded there. At noon he sent out warnings that a disastrous storm was imminent. Three hours later, realizing that an unparalleled storm was approaching, he went through the southern part of the city imploring the people to fly to the center of the island. As the telephone and telegraph systems were then wrecked, he made his way to the telephone station at the bridge west of the city and sent an appeal for aid, just before the cable parted. On his return, after this duty had been performed, he found his house destroyed and his wife and one child dead.

WASHINGTON.

THE DEACONESS HOME at Spokane has let a contract for a $1,000 addition to its main building. This will increase the capacity of the hospital by six beds.

THE CITY COUNCIL of Yakima has passed an anti-expectoration ordinance at the instigation of the State Medical Society. A second ordinance prohibits the issuance of burial permits without a certificate of death from a reputable medical practitioner.

WISCONSIN.

DR. F. W. WATSON has succeeded Dr. Timothy L. Harrington in his practice at Antigo.

DR. TIMOTHY L. HARRINGTON, after five years' practice in Antigo, has moved to Milwaukee.

DR. FRANK FORDYCE NEWELL, of Burlington, was married on September 3 to Miss Marie R. U. Young, at her residence in Chicago.

THE SUPERVISORS of Milwaukee county have appropriated $100,000 for improvements and additions to the county hospital at Wauwatosa.

THE HOSPITAL which the Lutheran synod is erecting at La Crosse, will soon be completed. It will cost in the neighborhood of $60,000.

DR. FERDINAND M. SCHULZ, health commissioner of Milwaukee, recommends in his annual report the closing of all wells, the medical control of marriage as a means of lessening hereditary diseases, and the examination of school teachers for tuberculosis. The death-rate of the city was 13.48 per thousand, a little higher than that of the previous year. Of the 3843 deaths, 2065 were males and 1778 females. The deaths under 5 years of age numbered 1541 or 40.1 per cent. of the total mortality.

CANADA.

WHOOPING-COUGH is epidemic at Ottawa.

THE PROFESSION in British Columbia is contemplating the formation of a provincial medical society.

SEVERAL DEATHS among children in Toronto have been traced to eating ice-cream which had been re-frozen.

DR. CHARLES O'REILLY, superintendent of the Toronto General Hospital, has just returned from an extended inspection trip of the hospitals of Winnipeg, St. Paul, Minneapolis, Milwaukee, Chicago and Detroit.

DR. LANG, of Glasgow, the new professor of chemistry at Toronto University, has been busily engaged re-organizing that department. Dr. W. Lash Miller has been promoted to the position of associate professor of physical chemistry.

AT THE INSTANCE of the Toronto medical health officer, Professor Shuttleworth has made an analysis and inspected the reservoir. As a result he has advised that the city reservoir be immediately cleaned and newly cemented.

AN ARRANGEMENT has been made between the British and United States governments whereby a Marine-Hospital physician will henceforth examine all immigrants leaving the port of Liverpool for Canada. His services will be supplemented by the services of a Canadian physician to be appointed by the railway and steamship companies, with headquarters at Liverpool. Last week three emigrants with favus were refused transit from Montreal to New York by the American inspector.

THE TOAST TO THE AMERICAN MEDICAL ASSOCIATION, at the banquet of the Canadian Medical Association, was received with gratifying enthusiasm. Dr. Frederick C. Shattuck, of Boston, responded in a clever and witty speech, saying that if the United States did not soon annex Canada, he hoped that Canada would soon annex the United States. The latter met with a happy approval; for, of course, there is no annexation sentiment in Canada in the former direction.

MARINE-HOSPITAL NOTES.

THE STATUS OF BUBONIC PLAGUE.

With the exception of India, where bubonic plague is prevalent in epidemic form, Rio Janeiro, Brazil, is probably the worst infected place in the world at the present time. Weekly reports to the surgeon-general of the Marine-Hospital Service from the acting asst.-surgeon located in that city show that there are under treatment in hospital between ninety and one-hundred cases, and that from three to five new cases occur each week. Persistent scientific disinfection and quarantine have stamped out the disease in all of the principal places where it has appeared within the last year or two, but constant vigilance is necessary to prevent its introduction and spread in all seaport towns. The viability of the plague bacillus is its chief danger. Epidemics are stamped out, but occasional cases continue to appear and are transported from one place to another, as is evidenced by the recent appearance of plague on a ship in the harbor of Hamburg, also a similar instance on board ship in the harbor of London. Plague was also carried from Syros Island to Constantinople within the past month. The present outbreak in Glasgow, while not yet traced, gives force to the argument that constant vigilance is necessary on the part of all seacoast cities, and that the danger is not past because the epidemic in any particular place has been suppressed.

INOCULATION AGAINST TYPHOID.

In a brief report to the surgeon-general, Dr. Geddings, acting director, hygienic laboratory, M.-H. S., summarizes the status of anti-typhoid inoculation as follows: In an infectious disease so widespread as typhoid fever it is perfectly natural that, since the discovery of its specific organism, efforts should have been made by bacteriologists looking to a means of preventing the disease, or of curing it when established, by means of serum therapy, or by affording an efficient protection against it by means of a "vaccination" such as has been practiced with success in the case of plague by the Haffkine prophylactic. Attention was invited to the subject in 1894, when Hughes and Carter reported favorable results in the treatment of two cases of typhoid fever with the blood-serum of a convalescent. These were followed by reports of a similar nature from Girard, Legrain, Sylvestri, Von Jaksch, Klemperer, Pollak, Weisbecker, Chantemesse and others. All of these observers had used either the serum of convalescents or the blister fluid of typhoid patients until the experiments of Chantemesse, who proceeded in the regular way by immunizing a horse by killed cultures of the typhoid bacillus and using its serum as a remedial agent. Lyonnette brought a horse up to a point of immunity where his serum had an agglutinating power of 1:33,000. Naturally the subject attracted attention in the Hygienic Laboratory of the Marine-Hospital Service and a series of experiments was commenced by P. A. Surgeon E. K. Sprague, then in temporary charge of the laboratory. Beginning in 1897, and continuing more or less regularly until December, 1898, a horse was treated, first with increasing doses of killed cultures of the typhoid bacillus, and later with intravenous injections of a suspension of live cultures of the same bacillus. In December, 1898, the serum of this horse had reached an agglutinating power of 1:250,000. In April, 1899, the agglutinating power of the serum on the typhoid bacillus had risen to 1:500,000. There has been no opportunity of using this serum upon actual cases of typhoid fever, but Sprague, experimenting with guinea-pigs, in two series of experiments, succeeded in preserving animals to whom a lethal dose of the typhoid bacillus had been administered by the use of the serum, while the controls in every case died. The above has been summarized from a very full report by P. A. Surgeon E. K. Sprague. The subject of anti-typhoid inoculation, from this time on, while receiving more or less desultory attention, was only prominently brought to the front again by English reports of inoculation of British troops destined for service in the Indian Empire, where favorable results seem to have been reached. The latest statistics on the subject come from South Africa, favorable conditions having arisen during the siege of Ladysmith, in the Transvaal, for observation on the subject. The following, from the *Journal of Tropical Medicine*, July, 1900, has important bearing on the subject: "Important statistics have at last been made public concerning the probable effects of inoculation against typhoid. The figures relating to the results have been communicated by Dr. A. E. Wright, professor of pathology in the Army Medical School, Netley, and they are founded on the experience gained in Ladysmith during the siege. The number of officers and men under observation numbered 12,234; of these 1705 had been inoculated, leaving 10,529 non-inoculated or non-protected. During the siege 1489 cases of typhoid fever occurred among the non-inoculated and 35 among the inoculated. From these figures it is seen that 1 in 7.07 of the non-inoculated contracted typhoid, whilst only 1 in 48.7 of the inoculated were attacked. The lessened mortality also among the inoculated is marked; for of the non-inoculated persons attacked 329, or 1 in 32, died; while among the protected 8 deaths only occurred, or 1 in 213. Professor Wright remarks that in the returns the 'inoculated' are not definitely specified; inoculations being made to include, in all probability, persons treated by either the anti-typhoid serum or the sterilized vaccine culture, *or even vaccination against smallpox*. We await with interest a full investigation and report on this most important and interesting question, and it is to be hoped that Professor Wright's treatment may be proved to be a real protection."

OTTAWA LETTER.

Canadian Medical Association.

The thirty-third annual meeting of the Canadian Medical Association was held in the Academic Hall of the University of Ottawa, Ottawa, on Sept. 12-14, 1900, under the presidency of Dr. R. W. Powell, of Ottawa, Dr. F. N. G. Starr, of Toronto, acting as secretary.

ELIMINATIVE AND ANTISEPTIC TREATMENT OF TYPHOID FEVER.

DR. W. B. THISTLE, of Toronto University, in contributing this paper, stated that it was now seven years since he introduced this plan of treatment of typhoid fever to the profession. He had never held to the opinion that the eliminative and antiseptic plan could rid such organs as the liver and spleen of the bacilli lodged in them. He held to the opinion that the draining of the intestinal walls following on the action of a purgative such as calomel and mag. sulph. would tend to get rid of some of these bacilli and their toxins in the intestinal walls, but did not claim to effect their exit from the liver, etc. In many instances he thought the treatment had been imperfectly applied without a clear conception of the underlying principle. Under this plan, Dr. Thistle has never had a fatal case of hemorrhage, what hemorrhage occurred having been always very slight. He has also had few perforations. In Toronto this plan of treatment is universally adopted. Statistics at the Toronto General Hospital show, that from 1893 until the present time, there have been 823 cases in that institution with 56 deaths—a mortality of 6.5 per cent. under this plan of treatment.

In discussing the paper, Dr. McPhedran stated that he had watched Dr. Thistle's work from the time of the appearance of his first paper on the subject, but could not agree with all his conclusions. He did not think that it lessened diarrhea, tympanites, fever or delirium. He considered that Dr. Thistle was harboring the idea that purgatives in typhoid was a new discovery with him; this was not so. Twenty-five years ago he gave these for the first ten days at least. In addition to this he used to give carbolic acid and iodin, and in a certain class of cases, he thought he had the exact treatment. Another class would then come along, in which that treatment had no effect whatever. He considered that the general toxemia that existed could not be eliminated through the bowel. It had to be done through the kidneys and skin.

SARCOMA OF THE RIGHT NASAL FOSSA WITH ORBITAL CELLULITIS.

This paper and case was presented by Dr. Perry G. Goldsmith, of Belleville, Ont. The patient was a man of 38 years, a farmer, with an unimportant family and personal history. He consulted the Doctor on August 4, with severe frontal headache. Growths and some bone were removed from the nose. After this the swelling and pain in the eye rapidly increased, so that it was seen to project far forward, downward and outward. The growths in the nasal fossa were curetted and sent to Professor Anderson of the Trinity Medical College Pathological Laboratory, who pronounced them of sarcomatous nature, of small round-cell variety, with the walls of the blood-vessels thin and poorly developed. The discharge from the nostril was of an odor similar to that emanating from cancer of the uterus. Up to ten years ago Bosworth had collected forty of these cases.

DR. R. A. REEVE, Toronto, stated that a number of years ago he had presented a paper before the Association on the same subject. He directed attention to the importance of examining the nasopharynx in diseases of the orbit. He instanced a similar case to Dr. Goldsmith's. In his case there was little pain, but an examination of the nose revealed the tumor.

PRESIDENT'S ADDRESS.

DR. R. W. POWELL delivered the annual presidential address. He recited a few reminiscences when on former occasions the Canadian Medical Association had met in the Capital City in 1871, 1881, 1889 and 1893. Reference was made to the South African war in order to show the unsatisfactory condition of affairs which permitted other colonial surgeons practicing their profession in that land without hindrance, whilst Canadians were debarred from the same privilege. An earnest and united effort on the part of the profession throughout the entire Dominion of Canada in an endeavor to bring about interprovincial registration, would facilitate matters in the direction of securing these privileges for the Canadian profession in other parts of the British Empire. The hackneyed subject of tuberculosis was lightly touched on; whilst a very important matter relating to the profession, that of a Medical Defense Association, was dealt with at considerable length. Dr. Powell favored the formation of such Association, and later on in the proceedings nominated a committee to look into the question and report on the advisability and practicability of forming a Dominion association of this character.

SOME EXPERIENCES IN THE SOUTH AFRICAN WAR.

DR. G. S. RYERSON dealt first with the experience gained of modern bullets. The very latest returns show that 936 officers and 11,701 non-commissioned officers and men had been wounded, of whom only 732 have died of wounds received in action, which is ascribed to the aseptic character of the bullet and the prompt attention and antiseptic treatment. Dr. Ryerson then dealt with these wounds, which is familiar to all. Referring to poisoned bullets being used, this was not the truth, as the tarnish or verdigris probably accumulated in transit through the barrel. He also doubted the fact of explosive bullets being used. The Boers made use of thousands of the Martini-Henry, a heavy bullet, which caused great destruction of soft parts, necessitating amputation. There were few amputations in this war; and quoted Kendal Franks, who performed 20 amputations in 2000 cases. Whilst abdominal section in wounds of the abdomen was mainly inadvisable, he saw one case where the results were excellent. He spoke highly of the magnificent work of the R. A. M. C.

DR. RODDICK spoke of the sacrifices of Dr. Ryerson in proceeding to South Africa at his own expense to carry out the work of the Red Cross Association. While in England recently, he stated, he made it his special business to inquire of returning Canadian soldiers as to the hospital management in South Africa, and although he had spoken to many of these, he had failed completely to find a single Canadian who had anything but praise for the hospital arrangements in that country.

OUR RACE AND CONSUMPTION.

SIR JAMES GRANT, Ottawa, read a paper on "Our Race and Consumption," which will appear soon in THE JOURNAL.

RECOGNITION AND MANAGEMENT OF TABES DORSALIS.

DR. ALLEN MCLANE HAMILTON presented a paper on this subject. As an etiological factor, syphilis was not referred to by the early writers on this disease. While some would attempt to divide the symptoms of the disease into the leg and eye types, the writer would consider that to be unwarranted. He considered there was a close resemblance or rather relationship between the different forms of cerebrospinal sclerosis. There was no disease of the nervous system which had drawn forth so many plans of treatment; and little or no good had resulted from any one thing. Most tabetics are favorable subjects for expectant attention; and many derive temporary benefit from some new drug. Looking back over a number of years, he finds that most good has been done where little or no medicine had been given. He has found rest by suspension and persistent cauterization of the back good treatment. In the opinion of the writer, syphilis can not be traced in more than 50 per cent. of the cases. For the arthropathies of the great joints there is little to be done. Perforating ulcer is a rare feature of locomotor ataxia, and most obstinately resists treatment. He has seen three cases of this unusual condition in ataxics; and the ulcer rarely exceeds two to three centimeters in diameter. One authority quotes five cases cured by nerve stretching.

THE PHYSICIAN'S "VASTER EMPIRE."

DR. JOHN HUNTER, of Toronto, dealt with the questions of sanitary science, education, social purity and medical missions. As regards sanitary science the purport of the paper

was a plea for the broader and freer attainment of principles of sanitary science and their application in the building and construction of our homes, schools, churches, etc. No dwelling-house should be constructed except under the supervision of an architect and a physician versed in sanitary science. Architects have improved wonderfully in the past ten years. Another important question is our educational system—the mental and physical health and development of our school children. The best way to secure physical vigor and high mentality is surely within the province of the physician to grapple with and study. In all forms of social purity and impurity, physicians should speak *ex cathedra* against every form of vice and immorality. The boys and girls of the family should be enlightened as to their sexual proclivities at proper periods, by the fathers and mothers, respectively. In medical missions he referred to the vast field for medical missionary work in foreign countries.

ADDRESS IN SURGERY.

MR. EDMUND OWEN took for his subject, "Tuberculous Lesions From a Clinical Point of View." He stated that he would deal with tuberculous lesions as the surgeon meets them day by day in the hospital ward, in private practice and in the operating theater. He considered the pathologist's thought to be only of the dead tissue. The surgeon sees the human tree during its life, but rarely follows it after death. The student does clinical and pathological work at different times, and he is enabled to follow the case straight from the ward to the laboratory. Study of the fresh specimen is best; for the specimen taken from formalin is no more like the condition than canned salmon is like fresh-run fish. He would not hinder experimental research work; it is absolutely essential. The life of a man is of more value than a sparrow or many guinea-pigs. It would be almost impossible to overestimate the direct value of experimental laboratory work. Strumous and scrofulous are terms devoid of meaning, and we now call tubercle by its proper name. There are three great factors in connection with tuberculosis with which the public must be made acquainted: 1. The disease is communicable, but they must be allowed a little time before they accept this statement and fact. 2. The disease is preventable; this follows almost as a corollary to the first statement. 3. The disease is curable. Years ago the subject of tuberculosis was regarded as well nigh hopeless. Tuberculosis is not necessarily of the intractable nature that it was formerly considered to be. Tuberculous lesions are exactly what they used to be; and Mr. Owen has worked at the largest children's hospital in London, England, for over a quarter of a century. We now take a much more hopeful view of these lesions. One rarely hears now of *vis medicatrix naturæ;* surgery has rendered it superfluous. All have noticed old cases of long-standing hip-joint disease where, in time, the boy actually grows out of his trouble. This is a popular superstition, but like most erratic beliefs, it is founded on a stratum of truth. In children these chronic diseases are always tuberculous. Where chronic abscesses occur it will not do to open and drain, but they must be scraped out, the unhealthy lining destroyed. In the treatment of these diseases the learned surgeon stated that he had failed to find any value whatever in iodoform. It is an irritant and a poison; and it is apt to be septic, as germs can grow on it. Mr. Owen condemned the forcible correction of spinal deformities, and considers that this deformity does not lend itself to operative treatment. There may, perhaps, be a small class of cases where it may eventually be found applicable, as where bone or organized inflammatory deposits press on the cord so that the patient has lost movement of the lower extremities. He considers that the plaster-of-paris jacket must be held responsible for much of the deformity of Pott's disease. He considers that the proper treatment of these cases is rest in the horizontal position, with plenty of good fresh air and sunlight. At the conclusion of his address he was accorded the hearty thanks of the association, on motion by Professor Shepherd, of McGill, seconded by Professor Cameron, of Toronto University.

DR. A. PRIMROSE, of Toronto, described Kocher's method of dealing with tuberculous knee-joint, and recited the histories of a few cases, in which he had obtained excellent results.

RECENT PATHOLOGIC STUDIES OF THE BLOOD.

DR. L. H. WARNER, Brooklyn, premises his statements by asserting that there is a necessity for experiments for the progress of pathology. His experimental researches were directed along three lines of inquiry, viz., experiments, observation and individual observation at clinics in hospitals. The examination of the blood in most case is of more importance than the examination of the urine. Dr. Warner gave the formula of a new staining solution which he had found very practicable: The blood specimen should be prepared in the regular manner. The slides are heated in a hot oven to 98 degrees. Immerse it for one minute in a 1 per cent. aqueous solution of methylene blue, washing in water, then in 1 per cent. alcoholic solution of eosin, washing again with water, and then in a 1 per cent. solution of bismarck brown.

SOME EXPERIENCES IN THE TREATMENT OF HERNIA.

DR. F. J. SHEPHERD, Montreal, said that it is now some twenty years since surgeons began to do these operations by the open method. Older methods in vogue before that date were touched upon and described. He spoke of a large hernia where the man could not put on his trousers. The methods of operation are almost as numerous as surgeons, but there are certain general principles underlying all operations: 1, the necessity for excision or obliteration of the sac; 2, closure of canal, and 3, union by first intention. Some also hold that alteration in the direction of the canal is necessary. Bassini's is the operation performed by Dr. Shepherd, although not always successful. He has used all kinds of sutures. Absorbable sutures are the best and, if antiseptic, are to be preferred. A suture that will last for three weeks is all that is wanted. He has used chromicized catgut; he has used it now for some time. He never washes out the wound, and thinks it better to dissect out the sac with the knife than to tear it with the fingers. He never uses a drain. For the last two years he has used rubber gloves in all his surgical work on the abdomen, and he considers his results have been better since he used them. In these operations the mortality is practically nil. Operations on children are now our most successful cases. Formerly they were not advised except in strangulated cases.

In discussing this paper and the cases recited, Dr. A. Lapthorn Smith stated that his experience lay mostly in ventral and umbilical herniæ, some of them being so large as to require twenty stitches. During the past two years he has abandoned silk and resorted to chromicized catgut, which he always prepares himself.

Dr. Shepherd, in replying, said if there was a little oozing in the wound he introduces between the edges of the wound a probe, and lets out the accumulated serum, and he finds that this is quite efficacious, as by this method he minimizes the chance of any germs entering.

SYPHILITIC GUMMATA OF THE SPINAL CORD SUCCESSFULLY TREATED BY ENORMOUS DOSES OF IODID OF POTASH.

DR. F. W. CAMPBELL, of Montreal, said the patient was a highly neurotic individual, and some time before had suffered from insomnia of an aggravated character. Retention of urine and loss of power in the lower limbs were noted. The patellar reflex was about normal. The loss of power in the lower limbs was absolute. The pulse varied from 80 to 96; the temperature never above 99. The stomach remained in fairly good condition all the time. A consultant from New York was brought in and a diagnosis was established of tumor of the spinal cord, situated about the first lumbar vertebra, which might be sarcomatous or syphilitic. The advice of the consultant was to give 500 grains of iodid of potash per day, at first commencing with a dram three times a day. Dr. Campbell recited the daily history of the patient while getting under the large dose and its gradual withdrawal. The patient is alive to-day and in good health, having recovered complete control of his lower extremities.

ADDRESS IN GYNECOLOGY.

DR. WILLIAM GARDNER delivered an address on "The Mistakes in Diagnosis and Treatment in Midwifery and Gynecology." We often learn more from our mistakes than from our successes. Correct and accurate diagnosis depends mainly on the sense of touch—only to be obtained by long and patient practice. The advantages of examining on a firm table, instead of on a couch or bed, were emphasized. The patient's rectum should always have been emptied before presenting for examination. It is best to empty the bladder by catheter when the patient is in position, as it is in this way that you will notice any discharges, etc. The physician will have to do this, because there are many women who are not able to do it through nervousness. And, again, we get an uncontaminated specimen for examination. Where tension is present in the muscles of the abdomen, if you make a series of circular movements over the lower abdomen, gradually narrowing your circle, you will be able to overcome whatever rigidity may be present. In physical examination Professor Gardner urged caution in the use of the sound. He rather considers it a dangerous instrument; that its use ought to be extremely limited, and is of the opinion that many women have lost their lives through this instrument. There is the danger of infection and injury of the uterine canal. The sound is a great deal too much used by the general practitioner. Mistakes in diagnosing displacements he considers the most common. The uterus is a very movable organ and a distended rectum or bladder may cause it to be diagnosed as a retroversion. It may be also moved out of place through vomiting, coughing, etc. In pelvic examinations, Dr. Gardner has made it a point to examine the position of the kidneys as well. Referring to examination by Sims' method, it is necessary to have the patient in proper position. In the diagnosis of pregnancy mistakes are often made. The patients are few in which the diagnosis can not be made by careful examination of history, signs, etc. Many women are probably inaccurate as to date. Dr. Gardner illustrated all his points by reciting cases to the point. He instanced one in particular where he once found a woman in his office on her hands and knees in the throes of a twin pregnancy, which a fellow practitioner had failed to recognize, and had tapped the gravid uterus and drawn off a considerable quantity of liquor amnii. The paper closed with an interesting account of mistakes in extrauterine pregnancy.

AN UNNOTICED FACTOR IN THE PRODUCTION OF ABDOMINAL AND PELVIC DISTURBANCES IN WOMEN.

DR. CLARENCE WEBSTER first spoke of symptomatology in women often overlooked by the general practitioner. He then took up the normal relationship of the abdominal and pelvic contents and proceeded to account for intrabdominal pressure, the pelvic organs being to a large extent maintained in their respective positions by reason of the pressure of the abdominal and pelvic walls. The average specific gravity of the viscera was very little more than that of water; the liver was 1.5 sp. gr. There is no proof that the mesenteries act as constant supports or were ever meant to be such; and the main factor in sustaining the viscera is the strength of the abdominal wall and pelvic floor. Local weakness of the abdominal wall has been fairly well described under hernia, while general weakness of the abdominal wall has been described as pendulous belly, and general weakness, in his experience, is an exceedingly rare condition. As to the question of etiology, the condition is found in women who have borne children; and that, on examination of the great majority of women, there is some degree of separation of the recti muscles in the region of the navel. All evidence later on may disappear, but permanent widening remains. The result of all this is unavoidable enteroptosis, and it is generally to be found in women who have worn corsets. A common displacement is that of the right kidney. Dr. Webster dwelt on the diagnostic symptoms of these conditions, and then proceeded to describe the operation he performs for their relief. This consists in bringing the edges of the two recti into apposition. He first performed an operation for the relief of the condition in November, 1898, and since that time 41 cases have been operated on, and the results have been most satisfactory.

DR. F. C. SHATTUCK, of Boston, delivered the "Address in Medicine." It is given in full in this issue.

GASTRIC HEMORRHAGES.

DR. GEORGE E. ARMSTRONG, of Montreal, stated there was a fairly well-determined field in which surgical interference may be of use in hemorrhage of the stomach. Hemorrhage occurs in 50 per cent. of gastric ulcers and is fatal in 8 per cent. These cases are arranged in two groups—the acute and the chronic. Rodman has reported thirty-one operations for frequently occurring or chronic hemorrhages, with six deaths. Dr. Armstrong has operated five times for gastric hemorrhage, one being a chronic case. In one of these cases the patient was getting along nicely after the operation, when the patient expired suddenly, and on post-mortem examination thrombi were found in the branches of the pulmonary artery.

TWO GASTROSTOMIES, TWO GASTROENTEROSTOMIES; PYLORECTOMY.

DR. A. E. GARROW, Montreal, reported these cases. One patient operated on was fed before he left the operating table. On another, a woman of 50 years, who had a persistent hacking cough, gastrostomy was performed and the patient discharged, able to feed herself through a tube. A man, aged 33 years, who had vomiting and blood in the stools, developed acute pain with a pale face. Duodenal perforation was present, and when the abdomen was opened gas escaped from the incision. When discharged, on July 24, last, he was feeling well. Six of these cases were reported.

THE MODERN TREATMENT OF RETROVERSION AND PROLAPSE OF THE UTERUS.

DR. A. LAPTHORN SMITH referred to the proper and most successful management of procidentia uteri in elderly women, between 70 and 75 years of age—a most pitiable condition. They may be otherwise in excellent condition; the perineum is so relaxed that no pessary will remain in place. Then the majority of these cases have an ulcerated cervix. After confinement the uterus remained enlarged and the pernicious habit of keeping women too long on their backs has a tendency to produce backward displacement. Dr. Smith feels certain that women who have been cured of this distressing condition will have little difficulty in persuading others to avail themselves of the treatment. He removed a woman's uterus a few months ago which had been out of her body for over twenty years, and the patient now assures him that she feels like a young woman. In correcting this deformity Dr. Smith makes a small incision in the abdomen and performs ventrofixation. After that the vaginal canal is narrowed by a large anterior and posterior colporrhaphy. In selected cases he also amputates the lower half of the organ and stitches the vagina to the upper half. He considers ventrofixation, if properly performed, a most reliable means of fastening up the uterus. The operation has given him the most complete satisfaction of any operation he has ever performed, especially when combined with amputation of the cervix and posterior colporrhaphy.

GASOLIN AS A SURGICAL DETERGENT.

DR. BRUCE RIORDAN, Toronto, contributed something highly original, that is the use of gasolin for cleansing dirty, greasy hands before stitching, etc., and also advocates its employment for preparing the field of operation before surgical procedures. It is away ahead of soap and water and brushes, and he now constantly carries a small bottle of the substance in his surgical bag. A report from Dr. William Goldie, Toronto, showed its effects on germs and germ life. As it is a highly inflammable substance, it should not be used in any quantity near an exposed light; and then it is painful in the eyes or ears. It is useful in cleansing sutures of accumulated blood and dressing powder, as it enables one to locate the stitches better.

DR. J. C. MITCHELL, Enniskillen, Ont., stated that he had tried gasolin recently as a detergent in two very severe threshing-machine accidents, where the parts were all smeared over with oil and grease and dirt, and it was very satisfactory, as

he was able to get perfect cleanliness, and both wounds healed by first intention.

DILATATION AND PROLAPSE OF THE STOMACH.

PROFESSOR MCPHEDRAN, of Toronto University, dealt principally with prolapse. This condition rarely occurs alone, but is associated with prolapse of other abdominal organs. There is generally present as well some degree of dilatation; and the abdomen may be prominent or flat, or even retracted. He recited the case of a man aged 51 years, a manufacturer, who had been ailing for two or three years. The stomach was below the umbilicus. He was directed to massage the abdomen very thoroughly and to practice abdominal gymnastics. Through this treatment, combined with dietetics, he has been restored to health and is able to resume business. Another case was of a woman, aged 35 years, who had been the subject of recurrent attacks of vomiting for two years; massage and abdominal gymnastics ordered with satisfactory results. In concluding, Dr. McPhedran spoke of the benefits of a change of scene in treating these cases.

DR. B. E. MCKENZIE read a paper on "Physical Training; Its Range and Usefulness in Therapeutics." It embraced the results of his observations for thirteen years past, and was ample justification of the benefits derived from gymnastics in the correction of lateral curvature, clubfoot, etc. He had found physical training also especially valuable in hysteria and chorea.

INTERPROVINCIAL REGISTRATION.

DR. T. G. RODDICK read a report of the committee having this matter in hand. A new feature was that allowing of representation on the proposed Dominion Council of homeopaths, as, according to the law of Ontario, these had their vested rights, and so must have similar interest in any Dominion Council. The homeopaths then will be allowed three representatives, which will be equivalent to the representation from any one province of the Dominion. Their term of office will be four years. This will not, however, be inserted in the bill as such, but will appear under "any other school of medicine having legal recognition throughout Canada," as the British Medical Council would not recognize any such body. Dr. Roddick stated that the bill would be introduced at the next session of parliament, and that the respective members of the committee must bestir themselves before their respective provincial parliaments, as these must sanction the measure before it could be finally acted upon by the Dominion parliament.

CEREBRAL ABSCESS.

DR. JAMES STEWART reported two interesting cases of abscess of the brain, situated in the temporosphenoidal lobe, and referred to the unusual existing aphasia, which was present in both of these cases, viz., simple inability to name objects. The first case occurred in a young man of 22 years, who had otitis media following an attack of influenza. Some six weeks afterward an abscess formed. The abscess was diagnosed as confined to this area simply on account of the peculiar aphasia, the simple inability to give the name of a pen when that object was presented to him. The patient was operated on by Professor Bell, who secured two ounces of pus. Meningitis, however, set in and the patient succumbed. The second case was a girl of 21 or 22 years. She had had ear trouble for a great many years, with very severe pain at times. She, too, had difficulty in naming objects, and she could not name any object whatever finally. She died suddenly a few hours before the operation was to be performed. On post-mortem two abscesses were found, one skirting the upper border of the lobe and the other about the center of its substance.

GANGRENE OF THE LEG FOLLOWING TYPHOID FEVER.

DR. H. H. CHOWN, Winnipeg, reported two cases of gangrene following an attack of typhoid fever, which had recently come under his observation. In the first case the patient had the classical symptoms of typhoid. Great pain set in in the calf of the leg, with collapse, while the limb was cold and bloodless. Cutaneous sensibility was lost over the leg. The third day after the complication set in the part involved included the lower third of the leg on inner side and lower half on outer. Operation was performed at upper and middle third of femur. Patient stood the operation well. The temperature before the operation was 102.6; pulse, 120. On the following day the temperature was normal and the pulse 110. On the tenth day the flaps were united. There was a rise of temperature a few days later—a relapse, with hypostatic congestion of the lungs. On the fifth day hemorrhage of the bowels. The patient is now a picture of health, weighing 200 pounds. The second was a somewhat similar case, in which the blood reacted early and promptly to the Widal test. The gangrene began in the first case on the eleventh day of the disease; in the second, on the ninth. Keen reports gangrene on the fourteenth day. The gangrene in the second case extended to the upper and middle third of leg. The leg was amputated and prompt union took place throughout.

DR. R. B. NEVITT, Toronto, mentioned a similar case coming under his observation during the past summer. Here gangrene occurred about the third week of the fever; patient was seen about a week or ten days afterward. Amputation was performed through the middle third of the femur. He also referred to a case of gangrene of the arm following an attack of pneumonia, recently observed by him.

NOTES ON ATROPIN.

DR. R. D. RUDOLF, Toronto, read a paper with the above title, illustrating by means of a chart the action of the drug on animals and inferences drawn therefrom of its therapeutic uses. He finds that the drug directly stimulates the heart, and thus the blood-pressure is markedly raised. He considered that the maximum single dose, as laid down by Witherstine, of 1/20 of a grain is too large, unless used as an antidote; we ought never to give more than 1/100 of a grain of atropin sulphate at one time, except in emergencies. He also referred to its action in catarrhal pneumonias of children, and its employment before anesthesia to ward off danger.

DR. A. D. BLACKADER considered, however, that strychnin, and not atropin, was the most powerful heart tonic we possessed. He thought that late experiments would throw doubt upon atropin being a direct stimulant to the heart muscle; and he thought it questionable to administer a drug, when we wanted to stimulate the heart's action, that would paralyze nerve endings.

LANTERN SLIDE DEMONSTRATION OF SKIN DISEASES.

DR. GEORGE H. FOX, New York, conducted this demonstration, which the members of the association appreciated most highly. The great majority of the skin lesions shown were of syphilitic origin and, as they appeared on the canvas, Dr. Fox described the histories of the cases. One in particular attracted attention, from the disfigurement of the nose and face—a huge mass of excrescences, which Dr. Fox was able to get rid of in the course of two or three months, leaving only a slight superficial scar. He laid down a timely word of caution in treating these conditions: that when the patient was run down and emaciated through large doses of mercury or iodid of potash, not to keep on pushing these drugs, but desist for a period and endeavor to build up the patient's general condition. Then return to the specific treatment, and the results would be found to be more material.

DR. F. J. SHEPHERD showed a case, a boy of 16, who, at the age of 6, sustained a severe cutting of the nerves of the brachial plexus, below the cords of the plexus. At that time, ten years ago, Dr. Shepherd dissected out each nerve and united their respective ends by suture. All did well, with the exception of the musculospiral, and as a consequence the lad has very little control over the extensors of the fore-arm.

DR. GEORGE H. BURNHAM'S method of treating syphilitic and other diseases of the eye is described in the title of his paper, "The Successful Treatment of Two Important Cases of Disease of the Eyes by the Combined Methods of Mercury and Iodid of Potash Internally and Pilocarpin Hypodermically." No such result follows in other plans of treatment, and with this a permanent curative result is obtained. The treatment has a wide application.

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MENTAL SANITATION.

DR. R. W. BRUCE SMITH, physician to the Brockville Asylum for the Insane, contributed a paper with the above title. It was a plea for prophylaxis in insanity, and he thinks that much would be accomplished in this direction in the twentieth century. He stated that insanity was on the increase in Canada, and thinks it can be duly ascribed to the fact that there have been no preventive measures employed. In order to accomplish good in this direction we must seek either to lessen the demands on, or to strengthen the resisting power of, the brain. He condemns intermarriages in families and also among those of a deranged mentality, and as 50 per cent. of the cases of insanity were hereditary, the descendants of these should be careful in contracting marriage ties. He referred to a portion of one county in Ontario alone where indiscriminate marriage and intermarriage has become most fruitful, and he has seen several members of one family from that locality inmates of the same institution at the same time. He considers that the day may yet dawn when we will give the same attention to the rearing of children as we now give to the breeding of horses. Speaking of farm life and the tendency it has to melancholy, he thought this class of the community should receive education in participating more in the enjoyments of life, and not continue to rot in domesticity. An upheaval in the sentiment and surroundings of the rural homes would work wonders in prophylactic principles.

The following officers were elected: President, H. H. Chown, Winnipeg; treasurer, H. B. Small, Ottawa; general secretary, F. N. G. Starr, Toronto. Place of meeting in 1901, Winnipeg.

Book Notices.

ANNUAL AND ANALYTICAL CYCLOPEDIA OF PRACTICAL MEDICINE. By Charles E. de M. Sajous, M. D., and One Hundred Associate Editors, assisted by Corresponding Editors, Collaborators and Correspondents, illustrated with Chromo-Lithographs, Engravings and Maps. Vol. V. Philadelphia, New York, Chicago: The F. A. Davis Company, Publishers. 1900.

Vol. V. of Sajous' Annual covers all subjects between "Methyl-Blue" and "Rabies." When it is said that this one is up to the high standard of excellence of the former volumes little further need be said. It is the most important and most valuable in the series, including as it does the specialties Laryngology, Ophthalmology, Otology, Neurology, Obstetrics, Pediatrics, and Orthopedic Surgery. It would be invidious to select any of the articles for special criticism or praise, for all are good. Excellent judgment has been exhibited on the part of the editor in assigning space for the various subjects, the amount allotted for the important ones being liberal, and the less important ones do not take more than their value calls for. The contributors are all specialists in the subjects on which they write and consequently all the articles are scientific and reliable, and bring their subject-matter up to date.

A MANUAL OF CHEMISTRY. INORGANIC AND ORGANIC. With an Introduction to the Study of Chemistry. By Arthur P. Luff, M.D., B.Sc.; F.R.C.P.; F.I.C., Physician to the Out-Patients in St. Mary's Hospital; and Frederick James M. Page, B.Sc., F.I.C., Assistant to the Royal School of Mines. Illustrated with 40 Engravings. Cloth, pp. 541. Price, $1.50. London, Paris, New York and Melbourne: Cassel & Co. 1900.

This is one of the standard manuals in Great Britain, and is the work recommended by the *Lancet* as the best text-book on the subject for the student. This revised edition is thoroughly up-to-date, the subject-matter is presented in a very convenient form and does not terrify the student by its compass. While we do not say that it excels some American works, it certainly has merits and advantages, and probably is one of the very best works of its size.

A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF MICROSCOPIC AND CHEMICAL METHODS, for Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M. D., late Assistant Resident Physician, Johns Hopkins Hospital, Baltimore. Third Edition, Thoroughly Revised. Illustrated with 136 Engravings and 18 Plates in Colors. Cloth. Pp. 558. Price, $3.50 net. Philadelphia and New York: Lea Brothers & Co. 1900.

Amongst the various works on the clinical diagnosis the present holds a creditable place. The author in this edition has revised the subjects throughout and added much new matter. It is a work well suited to the needs of general practitioners, and it has certainly met with favor among them. About one-half of the book is given to urinary examination; it therefore forms a very respectable treatise on the subject by itself. The illustrations are good and we see few things in the author's statements to which we could even suggest a criticism or take exception. He accepts in full apparently the bacilli of Sanarelli as a cause of yellow fever, a point on which many competent authorities are not fully prepared to agree. One or two other minor matters of this kind may possibly be found on reading the book, but it is in many ways fully deserving the favor it has received.

A MANUAL OF PERSONAL HYGIENE. Edited by Walter L. Pyle, A.M., M.D., Assistant Surgeon to Wills Eye Hospital, Philadelphia. Contributors, J. W. Courtney, M.D.; George Howard Fox, M.D.; E. Fletcher Ingals, M.D.; Walter L. Pyle, M.D.; B. Alexander Randall, M. D.; G. N. Stewart, M.D.; and Charles G. Stockton, M.D. Illustrated. Cloth. Pp. 343. Price, $1.50. Philadelphia: W. B. Saunders & Co. 1900.

There are plenty of health manuals in popular literature and books devoted to telling the layman what he must do to care for himself hygienically; many of these are simply embellishments of fads which their authors aim to introduce, others have more or less merit; but there are not very many that the physician can unequivocally recommend. The present volume is evidently intended to make up for deficiency in the literature of this kind, and Dr. Pyle and his collaborators have certainly produced a work that gives the facts in such a form as to be readily appreciated even by the non-medical reader and states these without any admixture of fiction and misdirection. In looking over the work we find very little in it to criticize and very much to commend. It does not exaggerate, and can be referred to as fairly conservative in its statements and, as far as we have been able to see, well up with the data of modern scientific medicine. The illustrations are fairly numerous and certainly a help to the text. The work is one that the physician can recommend to his patients, as it does not overstep the limits in giving information that the layman ought to know.

Deaths and Obituaries.

J. LANGDON SULLIVAN, M.D., of Malden, Mass, died suddenly of heart disease at his summer home in Ashfield, September 5, aged 73 years. He was a native of New Hampshire, a graduate of Harvard Medical School in 1849, a member of the Massachusetts Medical Society and THE AMERICAN MEDICAL ASSOCIATION and had practiced continuously in Malden for fifty-one years.

BENJAMIN HARRISON, M.D., died September 11, near Millwood, Clarke County, Virginia, aged 41 years, of typhoid fever. He was graduated from the University of Virginia, medical department, at Charlottesville, in 1883. After practicing in Clarke County he went to Richmond, where he enjoyed a large practice and was physician to the state penitentiary.

FREDERICK A. MEYER, M.D., died from apoplexy, August 31, at his home in Portland, Ore., aged 61 years. He was born in Breman, and received his degree from the University of Heidelberg in 1860. He had lived for many years in Portland, was for a time city physician, and for eighteen years has been the editor of the *Staats Zeitung*.

ANTHONY B. HANNUM, M.D., died September 1, at Hines, Ala., aged 89 years. He was a native of Kentucky, graduated in 1860 at the University of Nashville, medical department.

went to Western Texas and then moved to Alabama, where he practiced for many years.

DR. HUNTER MCGUIRE, of Richmond, Va., died September 19. A more extended notice will be given in our next issue.

SAMUEL F. GILBERT, M.D., died from dysentery at his home in Elysburg, Pa., August 30, aged 55 years. He was graduated from the department of medicine of the University of Pennsylvania in 1872, and had practiced in Elysburg for nearly twenty-five years.

DENNIS DOWLING MULCAHY, M.D., died in Newark, N. J., September 11, aged 53 years. He was a Fenian agitator imprisoned in England in the latter part of the 60s and in 1872 he was graduated from the College of Physicians and Surgeons, New York. He had been in failing health for some time.

A. CLARKE EMMETT, M.D., of Bluff City, Tenn., died at that place, August 30, as the result of a recent stroke of paralysis, aged 57 years. He was a graduate of the College of Physicians and Surgeons, Baltimore, in 1875.

JAMES F. MCELROY, M.D., died suddenly September 2, at Bowling Green, Ky. He was graduated from Jefferson Medical College, Philadelphia, in 1866, and had practiced for many years in Warren County.

WALTER H. ZINK, M.D., died at Branford, Conn., August 27, after a long illness from cancer of the stomach, at the age of 59 years. He was a graduate from the University of Würzburg, in 1862.

JOHN B. SAWYER, M.D., was one of the victims of the storm at Galveston, Tex., last week. He was a graduate of the University of Nashville, medical department, in the class of 1873.

PERCY L. HOOVER, M.D., died at his home in Mahaffey, Pa., August 25, from Bright's disease, aged 29 years. He was a graduate of Jefferson Medical College, Philadelphia, in 1895.

JOHN L. BARRETT, M.D., died suddenly at his residence in Binghamton, N. Y., August 27, at the age of 55 years. He was a graduate of Toledo Medical College, in the class of 1887.

HUBBARD K. BURROWS, M.D., a graduate of the Kentucky School of Medicine, Louisville, in 1888, died at his home, Box Elder, Tex., September 6.

JOHN F. RYAN, M.D., died suddenly at his home in Roxbury, Mass., September 2. He was a graduate of Tufts College Medical School in 1896.

DEATHS ABROAD.

PIERCE ADOLPHUS SIMPSON, M.A., M.D., died at Auchengrange, Lochwinnoch, Scotland, aged 63 years. He was for many years lecturer on medical jurisprudence at Anderson's College, Glasgow, and later professor of forensic medicine in the University of Glasgow. He was also editor of the *Glasgow Medical Journal*.

GUSTAV FRAENKEL, M.D., died at Breslau, Germany, July 29, aged 68 years.

Miscellany.

Inoculation Against Typhoid.—The government of India, considering the good results obtained from the protective inoculation against typhoid in the British Army, has issued orders to resume measures toward the inoculation of the soldiers entering the army of that country.

The Hospital-Ship "Maine."—This hospital-ship, equipped and maintained by Americans and in charge of American physicians and nurses has made two trips to South Africa. At Cape Town and Durban it received both British and Boer wounded to the number of 354.

Increase in Cancers.—C. Maeder calls attention to the constant increase in cancer shown by the statistics in Prussia, Saxony and Baden. The increase is out of proportion to the natural, apparent increase that would follow the lower death-rate from other diseases. Evidently, he adds in his article in the *Zeitschr. f. Hyg.*, xxxiii, 2, the causal agent is becoming more widely diffused or people are becoming less resistant.

Inoculation Against Enteric Fever.—The late Sir William Stokes, in a letter dated August 2, to the *British Medical Journal* from South Africa, stated that in bad cases of hemorrhage, transfusion of a saline solution at 100 F. either into subcutaneous tissue over the abdomen or into the cephalic veins was employed with good results. Careful records were being kept of cases inoculated and not inoculated against enteric fever. He said that it was yet impossible to give a decided opinion on the adequacy of its protection. Where inoculated cases contracted the disease, the type was as a rule milder. "Unfortunately those who had been inoculated had unbounded confidence in its efficacy, and consequently did not take as many precautions against contracting the disease as they should."

Societies.

Coming Meetings.

American Electro-Therapeutic Association, New York City, Sept. 25-27.

American Public Health Association, Indianapolis, Ind., Oct. 22-26.

Golden Belt Medical Society, Enterprise, Kan., Oct. 4.

Idaho State Medical Society, Boise, Oct. 4-5.

Utah State Medical Society, Salt Lake City, Oct. 4-5.

Wyoming State Medical Society, Cheyenne, Oct. 9-10.

Mississippi Valley Medical Association, Asheville, N. C., Oct. 9-11.

Iowa State Association of Railway Surgeons, Des Moines, Oct. 11-12.

Vermont State Medical Society, Rutland, Oct. 11-12.

Tri-State Medical Society of Alabama, Georgia and Tennessee, Chattanooga, Tenn., Oct. 11-13.

New York State Medical Association, New York City, Oct. 16-18.

Medical Society of Virginia, Charlottesville, Oct. 23.

THE JACKSON COUNTY (Ohio) MEDICAL SOCIETY held its first fall meeting, September 11, at Jackson, President Dr. Benjamin F. Kitchen, of Wellston, in the chair.

THE JASPER COUNTY (Mo.) MEDICAL SOCIETY met at Carthage, September 4, for its regular monthly session. Dr. Robert S. Kelso, of Joplin presented a paper.

THE GLENS FALLS (N. Y.) MEDICAL AND SURGICAL SOCIETY held its regular monthly meeting September 6, at which an interesting surgical case was reported by Dr. William J. Hunt.

THE HAWKEYE MEDICAL SOCIETY met at Perry, Iowa, and listened to papers by Drs. Oscar W. Lowery, of Grand Junction; John B. Conly, of Woodward, and Frances L. Rogers, of Perry.

THE BUTLER COUNTY (Ohio) MEDICAL SOCIETY met at Hamilton, September 5. Dr. Frank J. George read a paper on "Scarlet Fever," and Dr. Mark Millikin, of Hamilton, made a practical demonstration of "Intestinal Anastomoses."

THE ST. JOSEPH (Mo.) MEDICAL SOCIETY held its third annual session, September 11. A paper was read by Dr. Charles H. Wallace, on "Hernia," and Dr. John M. Bell opened the discussion on "Arteriosclerosis."

THE COLLEGE OF PHYSICIANS AND SURGEONS, Indianapolis, opened its term on September 20. The changes in the faculty are as follows: Dr. A. J. Banker, of Columbus, professor of obstetrics; Dr. Conrad W. Marxer, lecturer on obstetrics; Dr. John T. Scott, professor of histology; Dr. John F. Benham, professor of chemistry and toxicology; Dr. Harvey Moore, clinical lecturer on genito-urinary diseases, and Prof. R. H. Richards, lecturer on histology.

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THE PHYSICIANS' PROTECTIVE ASSOCIATION assembled at the Hotel Cadillac, Detroit, Mich., Sept. 4, for its annual meeting and elected the following officers: Dr. Guy L. Keifer, president; Dr. David L. Walmsley, vice-president; and Dr. Augustus W. Ives, secretary.

THE DETROIT (Mich.) MEDICAL SOCIETY AND LIBRARY ASSOCIATION resumed its weekly meetings, September 10. Dr. Fred. Grover, of Fraser, read the paper of the evening on "The Antiseptic and Antipyretic Treatment of Typhoid Fever."

THE FRESNO COUNTY (Cal.) MEDICAL SOCIETY held a meeting September 4. Dr. Thomas M. Hayden read a paper on "Tuberculosis," and a committee was appointed to arrange for the meeting of the Valley Medical Society in Visalia, October 12.

THE CHATTANOOGA (Tenn.) MEDICAL SOCIETY held a meeting, August 31, at which the physicians and trustees of Erlanger Hospital were present by invitation, to discuss ways and means for carrying on the work of the hospital.

THE DENTON COUNTY (Tex.) MEDICAL SOCIETY met in the county court-room, Denton, September 4. The untoward results of quinin were discussed. It was decided that hereafter the society meetings should be held every two months.

THE LA CROSSE COUNTY (Wis.) MEDICAL SOCIETY held a meeting in La Crosse, September 5. Dr. John A. L. Bradfield presented the paper of the evening on "Diseases and Injuries of the Cornea and Iris," and the discussion was opened by Dr. Mulford.

THE HARTFORD (Conn.) MEDICAL SOCIETY held an informal meeting September 3, at which Dr. Joseph E. Root presented a report of his trip abroad, with especial reference to the courtesies extended to him at the meeting of the British Medical Association.

THE KANKAKEE VALLEY DISTRICT MEDICAL SOCIETY, at its session at Hammond, Ind., September 11, elected Dr. Thompson, of Winamac, president; Dr. James T. Clark, of Hammond, vice-president; Dr. Nelson W. Cady, of Logansport, secretary, and Dr. William Kelsey, of Monterey, treasurer.

THE AUGUSTA (Ga.) MEDICAL SOCIETY met on August 28, Dr. W. Clifton Lyle, read a paper on "Typhoid Fever," and Theodore E. Oertel exhibited several pathological specimens. The society began its library by subscribing to a number of medical journals.

THE SUMMIT COUNTY (Ohio) MEDICAL SOCIETY held its regular meeting at Akron, September 4. After a discussion of the paper on "Hysteria" presented at the last meeting, Dr. James G. Grant reported a case of internal-ear disease, and Dr. Herman C. Theiss, an especially interesting case of spinal irritation.

THE MADISON COUNTY (Ala.) MEDICAL SOCIETY held its regular meeting on September 3, at Huntsville. The subject of the fever so prevalent in the city and county was generally discussed, after which Dr. Julius T. W. Haney, of Madison Station, read a paper on "The Origin of Medical Ethics and Business Relations," and Dr. William C. Wheeler, of Huntsville, presented an essay on "Smallpox."

THE RINGGOLD COUNTY (Iowa) MEDICAL SOCIETY met at Mount Ayr, September 13, at which the following papers were read: Dr. William Horne, of Mount Ayr, "Gastric Neuroses"; Dr. Albert C. Armitage, of Ellston, "Typhoid Fever"; Dr. Benjamin B. Waring, of Maloy, "Summer Diseases of Children"; Dr. Samuel Bailey, of Mount Ayr, "Hydrotherapeusis"; Dr. M. F. Hannelly, of Tingley, "Puerperal Infection"; Dr. Cassius T. Lesan, of Mount Ayr, "Bacteriology from a County Physician's Standpoint," and William W. Syp, of Knowlton, "Appendicitis."

THE KALAMAZOO (Mich.) ACADEMY OF MEDICINE met on September 4. Dr. Edward P. Wilbur presented a case of albinism in a young man; Dr. J. M. Elliott read a paper on "Eclampsia in Children," and Dr. Henry B. Baker, of Detroit, secretary of the State Board of Health, read a paper on the "Restriction of Tuberculosis." In the discussion, some members took exception to the regulation of the State Board of Health requiring reports of all tubercular cases, but the consensus of opinion was that the regulation was wise, and that the efforts of the board and its secretary were most praiseworthy.

THE DOUGLAS COUNTY (Wis.) MEDICAL SOCIETY held its annual meeting and banquet at West Superior, September 5. Dr. Joseph A. Rene, president, delivered the annual address. Dr. Charles M. Gould spoke on "The Health Commissionership of Superior." The following officers were elected: Dr. George Saunders, president; Dr. H. Jefferson O'Brien, vice-president; Dr. Patrick G. McGill, treasurer; Dr. John J. Quinn, secretary, and Drs. John Specht, Herbert J. Orchard, all of West Superior, and Dr. Edward T. Gauvreau, of Superior, censors.

THE NEW HAMPSHIRE SURGICAL CLUB held its annual meeting at the Farragut House, Rye Beach, September 6. President Dr. George D. Towne, of Manchester, delivered the annual address; Dr. George A. Tolman reported an operation for "Strangulated Dermoid Cyst"; Dr. John M. Gile, of Hanover, read a paper on "Surgical Treatment of Gall-Stones," and Dr. John C. Irish, of Lowell, Mass., a paper on "Diagnosis and Treatment of Diseases of the Gall-Bladder and Bile-Ducts." The election of officers resulted as follows: Dr. Ira J. Prouty, of Keene, president; Dr. John M. Gile, of Hanover, vice-president, Dr. Nelson W. McMurphy, of Concord, secretary and treasurer, and Drs. George D. Towne, of Manchester, Nelson W. McMurphy, of Concord, Frank Blaisdell, of Goffstown, Henry L. Stickney, of Newport, and Arthur C. Heffenger, of Portsmouth, executive committee.

THE COUNTY PRACTITIONERS' CLUB, composed of physicians of Floyd, Clark, Harrison and Washington counties, Indiana, held its quarterly meeting in Borden, September 7. Drs. Benjamin F. and J. Bodine Stalker were the hosts of the occasion. Clinical cases were presented by by Dr. J. Bodine Stalker and Dr. Charles H. Boston, of Bradford; and Dr. Robert S. Rutherford, of Galena made a case report. At the afternoon session Dr. F. Warren Samuel, of Louisville, Ky., read a paper on "Gall-stones in the Common Duct, Their Diagnosis and Treatment." The following officers were then elected: Dr. Benjamin F. Stalker, of Borden, president; Dr. William J. Purkhiser, of Salem, vice-president; Dr. J. Bodine Stalker, of Borden, treasurer, and Dr. Edwin L. Sigmond, of New Albany, secretary.

SPANISH-AMERICAN WAR NURSES' ASSOCIATION.—During the past week about sixty nurses who served in the Spanish-American war met at New York Hospital and effected the organization of the Association. Only those nurses who were in actual service for at least one month are eligible to membership, but with this restriction it is said that the membership may reach 500. Dr. Anita Newcomb McGee, Washington, D. C., acting asst.-surgeon, U. S. A., is the president, and Mrs. George Lounsbury, Charleston, S. C., corresponding secretary and treasurer. The association will meet next year in Washington, D. C.

Therapeutics.

Ulcers Exposed to Friction.

℞ Orthoformi—sat. sol. in collodion.....℥i 32|

M. Sig. Apply locally after anesthetizing the ulcer with a 4 per cent. solution of cocain, or with pure orthoform powder.

—Sajous.

Contusion of Eyelids.

℞ Acidi borici	℥ii	8|
Spts. vini	℥ii	64|
Aquæ, q. s. ad	Oi	512|

M. Sig. Locally applied to the wound.

℞ Tinct. arnicæ	℥ii	64|
Aquæ, q. s. ad	Oi	512|

M. Sig. Apply cold and change frequently, followed by hot-water compresses when swelling has subsided.

—*Sajous' Annual.*

Cystitis.

E. C. Dudley recommends the following prescription:

℞ Ext. hyoscyami ..... gr. i | 06
Camphoræ monobrom. ..... gr. ii | 12
Morphinæ sulphatis ..... gr. ss | 03
Cocoa butter, q. s.

M. Ft. suppository No. i. Sig. To be used as a suppository.

FOR IRRIGATING.

℞ Acidi borici ..... ℥i | 4
Sodii boratis ..... gr. xxx | 2
Sodii chloridi ..... gr. xv | 1
Aquæ destil. ..... Oi | 512

M. Sig. Irrigate the bladder with a double current catheter.

—Lobingier: *Sajous' Monthly.*

Freckles—Lentigo.

℞ Hydrargyri chloridi corros. ..... gr. vi | 36
Acidi acetici diluti ..... ℥ii | 8
Sodii boratis ..... gr. xl | 2 | 66
Aquæ rosæ ..... ℥iv | 128

M. Sig. Apply night and morning, at first gently; later, vigorously.

℞ Hydrargyri chloridi ..... gr. iii to viii | 20 to .5
Zinci sulphatis
Plumbi acetatis, āā ..... ℥ss | 2
Aquæ destil. ..... ℥iv | 128

M. Sig. Apply two or three times daily. Discontinue for two days when irritation is produced.

—Bulkley: *Cycloped. of Med.*

Chordee.

℞ Camphoræ ..... gr. xx | 1 | 33
Pulv. opii ..... gr. v | 33

M. Ft. pilulæ No. x. Sig. One or two at bedtime.

Chronic Cervical Metritis.

℞ Potassii iodidi
Potassii bromidi, āā ..... gr. xx | 1 | 33
Tinct. iodi ..... ℥ss | 2
Aquæ ..... ℥ii | 8

M. Sig. Inject into the hyperplastic tissue by means of a long syringe. —Monell.

Migraine.

℞ Sulphonal ..... gr. xx
Phenacetini ..... gr. viiss

M. Ft. wafer No. i. Sig. One wafer as needed.

M. Lilgois, in *N. Y. Med. Jour.*, recommends the above as being very efficient in the treatment of migraine.

Impetigo of Face and Scalp in Nursing Infants.

℞ Acidi salicylici ..... gr. xv | 1
Bismuthi subnitratis ..... ℥v | 20
Pulv. amyli ..... ℥ii | 8
Unguenti rosæ ..... ℥iss | 48

M. Sig. Externally applied. —*Med. News.*

Balanitis.

℞ Potassii chloratis ..... ℥i | 4
Aquæ destil. ..... ℥iiiss | 14

M. Sig. Bathe the gland well in this solution and apply the following dusting powder:

℞ Acidi tannici
Amyli, āā ..... ℥ii | 8

M. Sig. Apply locally. —F. Toledo.

Pemphigus in Infants.

℞ Zinci oxidi
Acidi salicylici, āā ..... gr. xii | 8
Lanolini ..... ℥i | 32

M. Sig. Apply locally. —*Riforma Medica.*

Lumbago.

℞ Sodii salicylatis ..... gr. x | 66
Potassii iodidi ..... gr. v | 33
Ext. sarsaparillæ fluidi ..... ℥ii | 8
Aquæ destil., q. s. ad ..... ℥ss | 16

M. Sig. At one dose; to be taken in water after meals three times a day. —Nestor Tirard.

Acute Rheumatism.

℞ Sodii salicylatis ..... gr. xx | 1 | 33
Spts. ammoniæ arom. ..... m. xx | 1 | 33
Aquæ camphoræ ..... ℥i | 32

M. Sig. At one dose. To be taken every two hours until six doses have been taken, or until temperature has fallen and pain has ceased, subsequently to be taken every six or eight hours.

Sansom recommends the above prescription. He finds that sodium salicylate is not incompatible with free ammonia or aromatic spirits of ammonia, and that the above shows no decomposition. —Stevens: *Phila. Med. Jour.*

Hypertrophied Tonsils.

℞ Resorcini ..... gr. lxxx | 5 | 33
Betanaphthol ..... gr. v. | 33
Aquæ destil. ..... Oi | 512

M. Sig. Irrigate the tonsils and pharynx twice daily.

Castex, in the *Med. News*, very strongly advocates the use of the above combination.

Coryza.

℞ Pulv. naphthalini
Pulv. acidi borici, āā ..... ℥vi | 24
Pulv. camphoræ
Ext. violets, āā ..... gr. xv | 1
Essentiæ rosæ ..... gtt x | 66

M. Sig. Use as a snuff three or four times a day.

—Exchange.

Superfluous Hairs—Hypertrichosis.

Superfluous hairs can be temporarily removed by the following:

℞ Barii sulphidi ..... ℥ii | 8
Pulv. zinci oxidi
Pulv. amyli, āā ..... ℥iii | 12

M. Sig. Make into a paste with water and spread over the part. —Gould.

Impotence.

℞ Ext. damianæ flu. ..... ℥iiss | 80
Tinct. nucis vomicæ ..... ℥vi | 24
Tinct. cinchonæ comp., q. s. ad ..... ℥iv | 128

M. Sig. One teaspoonful three times a day in water.

℞ Zinci phosphidi ..... gr. iii | 2
Ext. nucis vomicæ ..... gr. xii | 8
Ext. damianæ ..... ℥i | 4

M. Ft. pilulæ No. xxx. Sig. One pill four times a day.

Purulent Ophthalmia of Newborn.

℞ Protargol—2 to 5 per cent. ..... ℥i | 32

Sig. Apply locally three or four times a day, and permit it to remain five or ten minutes.

To prepare protargol the powder is mixed well with water into a paste and then diluted the required amount by the addition of luke-warm water.

Prostatic Pain Following Gonorrhea.

℞ Tinct. aconiti ..... ℥i | 4
Tinct. gelsemii
Antipyrini, āā ..... ℥ii | 8
Ext. ergotæ fluidi ..... ℥i | 32
Aquæ, q. s. ad ..... ℥vi | 192

M. Sig. A dessertspoonful every two or three hours in a wineglassful of water.

E. R. Corson recommends a combination similar to the above in treatment of prostatitis.

As a Gargle.

℞ Tinct. myrrhæ ..... ℥ss | 16
Potassii chloratis ..... ℥i | 4
Aquæ destil. ..... ℥iv | 128

M. Sig. Use as a gargle four or five times a day.

Alopecia Syphilitica.

℞ Hydrarg. chloridi corros. ..... gr iii | 18
Chloralis hydratis ..... ℥i | 4
Resorcin ..... gr. iii | 18
Ol. ricini ..... m. xv | 1
Spts. vini—90 per cent.—ad ..... ℥vi | 192

M. Sig. Keep the hair short and rub into the scalp daily.

—*Riforma Medica*—in *Cleve. Med. Gazette.*

Heart Failure in Typhoid Fever.

R.	Spts. ammoniæ arom.	ʒiv	16
	Tinct. digitalis	ʒii	8
	Elixiris simplicis	ʒiv	16
	Aquæ destil., q. s. ad	ʒiii	96

M. Sig. Shake. One teaspoonful every three hours.

Crusts of Varicella—Chicken Pox.

R.	Acidi carbolici	m. xv	1
	Acidi borici	ʒiss	6
	Glycerini	ʒiii	12
	Aquæ rosæ	ʒi	32
	Aquæ destil., q. s. ad	ʒiv	128

M. Sig. Apply locally.

R.	Acidi carbolici	m. v	33
	Icthyolici	ʒiss	6
	Vaselini	ʒi	32

M. Sig. Apply with a soft cloth.

Ingrowing Nail.

R.	Liq. potassæ	ʒi	4
	Cocainæ solutionis—4 per cent.	ʒiii	12

M. Pack the side of the nail with cotton soaked in the above.

Apply plaster strips to draw the soft tissue away from the nail margin. Never cut the side of the nail. —*Med. Times.*

Dr. Kinsman, in *Columbus Med. Journal*, outlines the following:

1. Remove all pressure from the nail by cutting away a piece of the shoe.

2. Disinfect with hydrogen dioxid until no more "foam" appears.

3. Apply a strong solution of cocain in the base of the ulcer.

4. Apply a drop of Monsell's solution in the ulcer, then cover loosely with gauze. Repeat this process every second day until the edge of the nail is released by retraction of the hypertrophied tissue. The patient suffers no pain from the application, and all pain has disappeared the second day. The cure is effected in a week or two without inconvenience or interference with business. —*Texas Med. News.*

Exophthalmic Goiter in Childhood.

R.	Strontii bromidi	ʒiss	6
	Strontii iodidi	ʒiii	12
	Aquæ destil.	ʒx	40
	Aquæ menthæ pip.	ʒv	20
	Syr. menthae pip.	ʒv	20

M. Sig. One teaspoonful three times a day.

—*Med. Record.*

Hepatic Colic.

R.	Etheris sulph.	ʒi	4
	Syrupi acaciæ	ʒiv	128

M. Sig. One tablespoonful every fifteen or twenty minutes until the pain is relieved.

Or,

R.	Chloroformi		
	Tinct. myrrhæ ää	m. xv	1
	Etheris sulph.	ʒi	4
	Mucilag. acaciæ	ʒii	8
	Syr. simplicis	ʒiiiss	112

M. Sig. One tablespoonful every fifteen minutes.

If vomiting is persistent, give small pieces of ice and sedative drinks, and apply turpentin stupes to the abdomen. Liniments are without effect.

—*Lemoine: Internat. Med. An.*

As suppositories in the above:

R.	Ext. belladonnæ		
	Ext. opii, ää	gr. 1/3	02
	Olei theobromæ	ʒiss	6

M. Ft. suppos. No. 1.

Formaldehyde in Catarrh.

R.	Formaldehyde	ʒi	4
	Glycerini	ʒiv	16
	Aquæ destil	ʒv	160

M. Use as a spray four or five times a day.

—*Merck's Archives.*

Medicolegal.

Dying Declarations Impeachable.—To render a dying declaration admissible in evidence, the Supreme Court of Indiana recognizes, in the case of Green vs. State, that it must be shown that the declarant was under the sense of certain and speedy death. But proof of that, the court says, may be afforded by circumstances, even in the absence of any express statement to that effect by the declarant. Moreover, the evidence on this point, it states, is first for the trial court to hear in determining the admissibility of the declaration. And, after the trial court has decided that the declaration is admissible, the court says, the jurors are entitled to know all of the circumstances surrounding the declarant, in order to determine what credit should be given to the declaration. Then, the court holds that a person accused of crime in a dying declaration is entitled to have contradictory statements made by the declarant introduced in evidence, as an impeachment of the dying declaration introduced by the state, although such statements are neither part of the res gestæ, or essential circumstances of the case, nor dying declarations. It says that, inasmuch as a defendant has no opportunity at the trial to have a cross-examination as to the subject-matter of the dying declaration, it would be most unjust to deprive him of the right of impeachment by contradictory statements, and the right would be lost to him if he were required to lay the usual foundation for that kind of impeachment.

Prohibiting Street Association With Prostitutes.—In Hechinger vs. the City of Maysville, the Court of Appeals of Kentucky holds unconstitutional a city ordinance making it unlawful for any person or persons other than the husband, father, brother or male relative, to associate, escort, converse or loiter with any female known as a common prostitute, either by day or by night, on any of the streets or alleys of the city. The penalty imposed for a violation of the ordinance was a fine of not less than $5 nor more than $20. Manifestly, says the court, the ordinance was intended to accomplish a proper and laudable object. But it does not think that it was properly guarded. It says that there can be no good reason in exempting any male relative from the operation of the ordinance except a husband, father or brother. On the other hand, a mother or sister should be allowed the same privilege as allowed to the father or brother. Moreover, any person should be allowed to converse with such a female long enough to transact any necessary and legitimate business, and no one should be punished for a violation of an ordinance such as the one under consideration unless the party so offending had knowledge or information of the disreputable character of such female. But an ordinance conforming to the views thus indicated, it says, would be clearly within the police power of the city council, and would be a proper and commendable exercise of the police power.

Suggests Case of Fetichism.—The Court of Criminal Appeals of Texas has reversed a conviction of an attempt to commit rape, in Draper vs. State. The prosecutrix, who was the main witness for the state, testified substantially, among other things, that she was 13 years of age; that her aunt had given her to the accused, Draper, when she was about 4 years old, and that she had lived with him ever since; that he was an unmarried man; that for four years he had had sexual relations with her, and that she knew he penetrated her because it hurt her. On the other hand, three physicians examined her, and found her hymen intact, and no evidence of her being penetrated by the male organ, or otherwise. The only variation in their evidence was that one of them thought the parts looked a little flabbier than naturally, which might have resulted from other causes than copulation, and another of them thought there was more elasticity about the hymen and adjacent parts than usual, though he did not know that he would have noticed it if he had not been examining the prosecutrix with reference to this case. Now, the testimony of the physicians, the court thinks, showed her testimony false as to the penetration at least. True, it says, rape could be committed

without rupture of the hymen by merely introducing the male organ between the labia, but this was not the testimony. And it declares it unreasonable to believe that the accused had been endeavoring during four years to penetrate her parts, without success, and without leaving any manifestations of his attempts. Not to discredit the story of the prosecutrix entirely, it adds, by way of suggestion, that he may have been afflicted with that form of sexual disease known as fetichism, where the victim, laboring under venereal excitement, simply desires to gratify his lust by contact of his genital organs with any part of the body of a woman.

Aggravated Sufferings from Miscarriage Provable.—The case before the second appellate division of the Supreme Court of New York, of Witrak vs. the Nassau Electric Railroad Company, was one brought by a married woman to recover damages for personal injuries which she sustained in consequence of being struck and knocked down by an electric car. She was pregnant at the time of the accident, and was delivered of a stillborn child about six weeks afterward, the indications being that the child had died but a short time before delivery. The medical evidence showed that the confinement was about ten days late, and the physician who attended her expressed the opinion that the injury was at least one factor in producing the destruction of the fetus. Now, in a husband's suit for damages arising out of a personal injury to his wife, as a result of which she suffered a miscarriage, it has been expressly held, says the court, that nothing can be recovered by the husband on account of the loss of offspring. The inquiry is too remote and speculative. And the reasoning which denies a right of recovery to the husband, the court thinks, is equally applicable to a similar claim on behalf of the wife herself. But where the loss of offspring, as in the case of a miscarriage, is accompanied by bodily injury to the mother, or the infliction of pain upon her, such injury or pain, the court holds, is a proper subject of consideration in the assessment of damages. So in actions of the character of this case, proof to the effect that the plaintiff's sufferings have been aggravated by reason of a miscarriage caused by the accident, the court holds, is clearly admissible in evidence. The plaintiff is entitled to recover for the physical injury which she has sustained, and for the pain and suffering which she has endured and will endure, as a result of the defendant's negligence. Consequently, so far as a miscarriage or the delayed delivery of a stillborn child augments the mother's physical injury, pain, or suffering, so far, the court holds, is it proper to be considered on the question of damages; but its effect in depriving the mother of offspring can not be taken into account as an element of damage at all. Furthermore, the evidence in this case showed that the plaintiff was badly bruised upon the left leg, knee, thigh, and hip, so that she had suffered a good deal of pain in the year and a half from the time of the accident to the time of the trial. The extensor muscle had been injured, a portion of it being torn from the kneepan, which a medical expert characterized as a permanent injury, causing a lameness that would be lasting. For it all, or rather for all the actionable damages stated, the court thinks an award of $3500 not excessive.

Liability for Delay of Operation.—In the appealed case of the Galveston, Harrisburg & San Antonio Railway Company vs. Hanway, the Court of Civil Appeals of Texas has reversed a judgment for $9000 against both the railway company and a physician who was sued with it for damages on account of negligence alleged to have been committed in delaying the amputation of an employee's foot for twenty-four hours, which negligence was alleged to have caused his death. The operation, when performed by the physician, was properly and skilfully done. This was not disputed. Consequently, the case against the company and the physician depended, first of all, on the question of whether or not he was negligent in postponing the operation a day, and, in order to find the company and him liable in any event, it was essential, the court says, that the jury should find, from testimony reasonably sufficient to enable them to so find, that, if the operation had been performed on the first morning in question, the patient would not have died. Now, not one of the medical witnesses testified that the patient would have lived, had the amputation taken place a day earlier, nor gave it as his opinion that he would have lived. They were unanimous in protesting their inability to say whether or not he would have lived. A number of them said that the chances were less the longer the delay after the conditions once became favorable for the operation. Continuing, the court states that it might have been that, if there had been testimony in the case, such as was claimed, but the court thinks erroneously, as having been given by one witness, that the percentage of deaths in amputations was less than 1 per cent., a finding of the jury that the patient would have recovered would have been sustained, on account of the extreme probability that such would have been the result; for the death-rate in such instances would then have appeared to be practically nothing. But there was no such evidence, as has been shown. The evidence showed that a substantial percentage of the cases of this kind, performed under favorable conditions, result in death. And, if no physician would go so far as to give it as his opinion that an operation a day earlier would have saved the patient's life, the court declares that it fails to see how a jury could have been able to so find. Wherefore, it holds that the company could not be held liable, in this case, for another reason. It appeared that, while it maintained a hospital department in connection with its road, under the control of its manager, and for this it employed a chief surgeon and others, still it was not conducting this department as a business; it derived no profit, but, instead, sustained a loss, therefrom, and that, in fact, the department was not designed for profit. Under these circumstances, the court declares that the company could not be held liable for the negligence of the physicians it furnished, except on the ground of want of proper care in selecting or retaining them. It thinks it different from a case where a large profit had been derived, which went to the company's credit in the bank, with its other moneys. Here, it thinks that the company's obligation was simply to furnish proper attention and treatment, and that this duty was performed when it appeared that the physician in question was competent.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

New York Medical Journal, September 8.

1 *A Plea for Early Naked-Eye Diagnosis and Removal of the Entire Organ, With the Neighboring Area of Possible Lymphatic Infection in Cancer of the Larynx. John Noland MacKenzie.
2 *Report of a Case of Nephrectomy for Ascending Tuberculosis, with Some Remarks on Cystoscopy and Catheterization of the Ureters in Women. (Concluded.) Hiram N. Vineberg.
3 *The First-Aid Packet in Civil Practice, and the Organization of First-Aid Societies. M. J. Shields.
4 *Feeding the Infants of the Poor with Unsterilized Cow's Milk. George Thomas Palmer.
5 *Severe Hemorrhage after Operations on the Throat and Nose. Report of Five Cases. Arthur Ames Bliss.
6 The Surgical Treatment of Laryngeal Cancer. J. Solis-Cohen.

Philadelphia Medical Journal, September 8.

7 *The Etiology and Pathology of Empyema. Joseph McFarland.
8 *Prostatic Calculus. John C. Spencer.
9 *Heroin in the Treatment of Phthisical Cough and Whooping-Cough. M. Loewenthal.
10 *Note on the Frequency of Renal Casts Without Albuminuria. C. F. Martin and F. B. Jones.
11 A New Forceps for Holding Slides in Staining. Thomas S. Kirkbride, Jr.
12 Legal and Judicial Disagreement and the Shortcomings of Medical Witnesses. Irving C. Rosse.
13 *Rheumatic Fever. J. Newton Hunsberger.

Medical Record (N. Y.), September 8.

14 *Dilatation of the Cervix by Means of a Modified Champetier De Ribes Balloon. James D. Voorhees.
15 *Observations on the Gastric Functions Before and After Gastroenterostomy. Charles S. Fisher.
16 *A New Physical Sign in Dislocation of the Heart; Gastrectatic Dyspnea and Pseudo-Angina. Albert Abrams.
17 *Two Cases of Intestinal Obstruction Following Vaginal Hysterectomy, and one After Pelvic Abscess, with a Secondary Operation in Each Case. A. Goldspohn.

Boston Medical and Surgical Journal, September 6.

18 The Scope and Aim of the Section's Work. Kenneth MacLeod.
19 *Notes on Dermatitis Venenata. George F. Harding.

20 *Notes on the Treatment of Ataxic Patients by Co-ordination Exercises, with the Demonstration of Two Patients. James J. Putnam.
21 Two Cases of Abnormal Sexual Development. George G. Sears.

Medical News (N. Y.), September 8.

22 *Trophic Changes in Consumption: A Contribution to the Symptomatology of this Disease. Henry Herbert.
23 *The Effect of Flashes of Electric Light on the Eye. Dunbar Roy.
24 Graves' Thyroid Disease. O. T. Osborne.
25 *The Status of General Anesthesia in 1900. M. L. Maduro.
26 *The Physiology of Sleep. H. H. Stoner.
27 An Attack of Urticaria Occurring in the Tropics Simulating Angioneurotic Edema. Jacob S. Green.

Cincinnati Lancet-Clinic, September 8.

28 *Penetrating Wounds of Chest. C. M. Paul.
29 Infant Feeding. James W. Rowe.

St. Louis Medical Review, September 1.

30 Local Diagnosis of Diseases of the Spinal Cord. Philip Zenner.

September 8.

31 *Observations in Genito-Urinary Technics. J. Rilus Eastman.
32 Treatment of Apparent Death in the New-Born. B. S. Schultze.
33 Treatment of Biliary Lithiasis. A. Gilbert and L. Fourier.

The Medical Age (Detroit), August 25.

34 Common Sense versus so-called "Christian Science." C. C. Mapes.
35 *Simple Goiter. F. W. Powers.
36 Conservative Treatment of Acute Suppurative Inflammation of the Drum Cavity and Attic. William Cheatham.

American Practitioner and News Louisville, Ky.), August 1.

37 *Hay-Fever. R. Alexander Bate.
38 *The Drug Habit and Its Treatment. H. T. Rivers and P. H. Stewart.
39 Discursive Notes as to the Management of the Insane. Barton W. Stone.
40 Antitoxins. G. P. Hachenberg.
41 *Inflammation of the Middle Ear in Infants and Children. Adolph O. Pfingst.

American Journal of the Medical Sciences (Philadelphia), September.

42 *A Case of Ligature of the Abdominal Aorta Just Below the Diaphragm, the Patient Surviving for Forty-eight Days; With a Proposed Instrument for the Treatment of Aneurisms of the Abdominal Aorta by Temporary Compression. W. W. Keen.
43 *Granular Degeneration of the Erythrocytes, and Its Significance in Clinical Pathology. Ernst Grawitz.
44 Idiopathic Dilatation of the Esophagus. Max Einhorn.
45 *Myositis Ossificans. Lydia M. DeWitt.
46 Sarcoma of the Small Intestine. E. Libman.

Maryland Medical Journal, September.

47 Remarks on Intestinal Obstruction. Randolph Winslow.
48 Traumatic Rupture of the Popliteal Artery with Gangrene of the Leg—Amputation—Recovery. James C. Bloodgood.
49 A Case of Cancer of the Esophagus with Perforation into the Left Pleural Cavity; Death from Pyopneumothorax. Julius Friedenwald.
50 Report of a Rare Case of Monstrosity. H. G. Beck.

Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), September.

51 Case of Xanthoma Diabeticorum. Samuel Sherwell and James C. Johnston.
52 *On the Pathology of Gonorrheal Pyelonephritis—Presentation of a Gonorrheal Kidney. Bransford Lewis.
53 Case of Epidermolysis Bullosa. Chas. P. Russell.

Oklahoma Medical Journal, September.

54 Refraction of School Children's Eyes. E. E. Hamilton.
55 *A Case of Double Vagina and Double Uterus—Four Pregnancies. Herman E. Pearse.
56 A Case of Osteo-Sarcoma of Inferior Maxilla—Operation. A. L. Blesh.

Archives of Otology (N. Y.), April-June.

57 *Re-examination of the Hearing of Deaf-Mutes Originally Tested in 1893. F. Bezold.
58 Fourth Report on the Patients Treated During the Year 1898 in the Hospital and Outdoor Department for Aural Diseases at the University of Strassburg. F. Alexander.
59 A Case of Bezold's Mastoiditis Secondary to Facial Erysipelas; Operation: Recurrence of the Erysipelas within Twenty-four Hours; Cure. John Dunn.
60 *Nasal Empyema as an Etiologic Factor in the Establishment and Continuation of Post-Nasal Catarrh and Catarrhal Inflammation of the Middle Ear, with an Especial Consideration of the Enlargement of the Posterior End of the Middle Turbinate as a Predisposing Cause. Carolus M. Cobb.
61 Three Cases of Diabetic Mastoiditis. E. P. Friedrich.
62 Sharply Circumscribed Sound-Defects in the Hearing-Fields of Certain Deaf-Mutes. A. Schwendt.
63 Multiple Rarefaction (Spongiosirung) of the Labyrinth—Capsule found at the Autopsy of a Case of Progressive Deafness. F. Siebenmann.
64 Contributions to the Knowledge of Intracranial Complications of Ear Disease. Geo. Lehr.
65 Examination of the Pupils of the Municipal Deaf-Mute School at Danzig, Germany. G. Kickhefel.

The Stylus (St. Louis), September.

66 The Preparation of the Lying-in Patient and the Management of Normal Labor. J. H. Alexander.
67 Something Needed for the Worthy Doctor to be Appreciated. R. H. Simpson.
68 Stricture of the Urethra. (To be continued.) C. M. Nicholson.
69 A Few Words About the Veins. R. W. Baker.
70 A Case of Hyperchlorhydria. (Continued.) M. D. Schmalhorst.

Medicine (Detroit), September.

71 Bone Food. B. T. Whitmore.
72 *Normal Salt Solution in the Treatment of Hemorrhage in Typhoid Fever. C. H. Andersen.
73 Pregnancy Complicated by Suppuration of Fibroids. Charles G. Cumston.
74 *Treatment of Tuberculosis of the Lungs. C. J. Whalen.
75 *Suggestion without Hypnotism as a Therapeutic Agent. Harold N. Moyer.

Southern Practitioner (Nashville, Tenn.), September.

76 Thyroid Gland in Medicine. W. H. Witt.
77 Cancer. W. B. Young.

Indiana Medical Journal, September.

78 Some Hoosier Doctors of My Acquaintance. Miles F. Porter.
79 Rectal Alimentation. J. N. Jerome.
80 Simultaneous Occurrence of Typhoid Fever and Malarial Fever. Jas. W. Bevans.
81 *Obstruction of the Upper Air-Passages with Illustrative Cases. Fletcher M. Gardner.
82 *Head-Last Presentation—Left Side Position of Mother. S. Hunt.
83 Case of Strangulated Hernia in an Infant, with Operation and Recovery. W. D. Schwartz.

St. Paul Medical Journal, September.

84 *The Lymph Node as a Factor in Diagnosis. C. A. Wheaton.
85 Varicose Veins of the Lower Extremity. C. H. Mayo.
86 *The Treatment of Penetrating Wounds of the Chest. James H. Dunn.
87 *The Value of the Newer Signs and Procedures as Aids in Diagnosis. George D. Head.
88 *Cardiac Dilatation. A. W. Stinchfield.
89 *Early Diagnosis of Pulmonary Tuberculosis. J. W. Bell.
90 *Constant or Sustained Cold as a Therapeutic Agent. Soren P. Rees.

Journal of Medicine and Science (Portland, Me.), August.

91 Lacerations of the Cervix Uteri. Importance of Repair. John B. Shober.
92 Views of Scientists and Sciolists on Abortion. E. D. O'Neill.

Railway Surgeon (Chicago), August 21.

93 *Traumatic Laceration of the Male Urethra. H. A. Leipziger.

Medical Standard (Chicago) September.

94 Methods in the Diagnosis of Diseases of the Stomach. Charles D. Aaron.
95 Diseases of the Arteries. Albert Abrams.
96 Cervical Polyp; Gonorrheal Infection; Carcinoma Uteri. Henry P. Newman.
97 Concerning Truss-Fitting. H. H. DePew.
98 Secondary Syphilis. William S. Gotthelf.
99 Pelvic Surgery Without Ligatures and Retention Clamps. Valdemar Pleth.
100 Varicella, Variola and Vaccination. Marcus P. Hatfield.

International Journal of Surgery (N. Y.), September.

101 *Diaphragmatic Hernia, with Report of a Case. E. W. Walker.
102 *Hysterectomy. W. H. Haughey.
103 Regional Minor Surgery. (Continued.) George G. Van Schaick.
104 Treatment of Fractures. (Continued.) W. L. Estes.
105 Severe Crushing Injury of the Hand. H. L. Stickney.
106 Technique of Surgical Gynecology. (Continued.) Augustin H. Goelet.
107 Chronic Cystitis in Women. Diagnosis and Treatment. Matthew D. Mann.
108 Report of Case of Recurring Multiple Sarcoma cured by Contracting Erysipelas. P. O'Keef.
109 Fracture of the Ribs. George S. von Wedelstaedt.
110 Report of a Case of Fractured Patella Treated by Massage. Chas. B. Chidester.

Carolina Medical Journal (Charlotte, N. C.), August.

111 Brief Report of Some Recent Surgical Cases. Stuart McGuire.
112 La Grippe—Otitis Media Purulenta—Mastoiditis—Recurrent Facial Paralysis—Operation—Recovery. John Dunn.
113 Surgery for the Prevention and Cure of Crime and Criminals. A. J. Wakefield.
114 Unusual Case of Laudanum Poisoning—Recovery. J. E. Kerr.
115 A New Pedicle Needle. L. B. Owens.
116 A Few Words to the Editor and Readers. W. Peyre Porcher.

Hot Springs Medical Journal, July.

117 *Gunshot Wounds. E. B. Osborn.

New Orleans Medical and Surgical Journal, September.

118 Variola—Its Symptomatology, Complications, Diagnosis and Treatment, as Learned from the Study of 100 Cases Seen

at the Shreveport Pest-house in January and February, 1900. S. C. Barrow.
119 Successful Treatment of Variola. V. Lehmann.
120 *Improved Method of Vaccination—Vaccinoid. V. Lehmann.
121 Suggestions for the Treatment of Gastrointestinal Ailments of Children. B. A. Colomb.
122 Acute Rheumatism in Childhood, with Report of Two Cases. E. D. Fenner.
123 Pneumonia After Surgical Injury. Arthur V. Meigs.
124 Case of Peripheral Neuritis—Methods of Examination. Chas. Wells.

New England Medical Monthly (Danbury, Conn.), September.

125 *Address. A. Jacobi.
126 Latent Form of Endometritis. James A. Hopkins.
127 Chloroform in the Sitting Posture. D. E. Keefe.
128 The Treatment of Dyspepsia. Eugene C. Underwood.
129 Some Cases of Obstinate Headache, the Woman's Burden. S. Green.
130 The Diagnosis and Treatment of Genital Dislocations. Byron Robinson.
131 The Use of Carold in Mal-Digestion. Geo. A. Gilbert.

Northwestern Lancet (St. Paul, Minn.), August 1.

132 *Prophylactic Douche. O. S. Chapman.
133 Some Obstetric Notes and Reminiscences. F. W. Dimmitt.
134 Conservative Intranasal Surgery. O. Wellington Archibald.
135 Urinary Excretion—Normal and Abnormal, with Treatment of the Latter. M. H. Cremer.
136 Catarrhal Colitis. J. C. Adams.

Medical Times (N. Y.), September.

137 The Treatment of Asthma; Methyl Blue in Vesical Irritation. Thomas Hunt Stucky.
138 Some Observations on the Prognosis and Treatment in the So-called Catarrhal Deafness. Dunbar Roy.
139 Gall-Stones Followed by Spontaneous Rupture of the Gall-Bladder; Operation; Recovery. A. Morgan. Vance.
140 Treatment of Gastroenteric Infection of Children. M. E. Fitch.

Mississippi Medical Record, September.

141 *The Use of Hypnotism in General Practice. E. H. Martin.
142 Acute Suppurative Osteomyelitis. W. R. McKinley.
143 Be Ready. L. A. Murdock.

AMERICAN.

1. **Cancer of the Larynx.**—MacKenzie makes a plea for more thorough work in case of cancer of the larynx. He insists on the importance of thorough investigation and removal of all diseased tissue, also the removal of the lymphatic glands of the neck if they are visibly involved. The partial removal of any diseased infectious condition like cancer only stimulates its extension, the operation must be thorough if it is to be effective. He says the time will surely come, if it has not already, when the surgeon will consider it his duty in cancer of the larynx to remove not only the entire organ, but all the neighboring hypertrophied area.

2. **Catheterization of the Ureters in Women.**—Vineberg states that he has used ureteral catheterization over 100 times in fully fifty patients and has never seen any bad effects result, excepting some pain in the twenty-four hours following the operation. He has also carried out the procedure without any anesthetic in the knee-chest posture and the patient has been able to go home from the office shortly afterward. It requires, of course, strict asepsis, and one should wait until he has the ureteral orifice fully in view, then, with a small pledget of cotton soaked in some antiseptic solution, the inside of the cystoscope can be mopped clean and the mouth of the ureter may be cleansed with a second pledget. Then the sterilized catheter is passed directly into the orifice without coming in contact with the vesical mucosa. He reviews the diagnostic and therapeutic indications of the procedure and reports a case in which the introduction of the catheter seemed to be at once curative. He does not explain how this happens to be so, though he offers one or two theories to which he shows the objections.

3. **First-Aid Packet.**—The object of Shields' article is to call attention of physicians, especially those who have to do with communities where accidents are frequent, to the organization of first-aid societies. They are organized by selecting men who are efficient, willing to give some attention to the subject, temperate in their habits, intelligent and conscientious, who will be faithful in attending the meetings of the society and recognize that they are doing it for charity's sake, do not get disconcerted easily, and have no aversion to the sight of blood. He has organized such a society and finds the men zealous and willing and he recommends that they wear a distinctive badge so that it will be known who can be relied upon for help in time of need. The financial part of the work is easily managed, the total of his expenses having been only $50, voluntarily contributed. He has not had to call on any companies, but has no doubt that they would be willing to contribute.

4. **Infant Feeding.**—Palmer reports experience with feeding of infants with modified unsterilized cow's milk in Chicago. The principal effort has been to obtain good, clean certified milk, which was obtained from the dairy of H. B. Gurler, of DeKalb, Ill., and their modifications were not pushed extensively for this milk, which shows no greater variation than mother's milk under normal conditions. Their midsummer mortality with this milk taken into the unhygienic homes of the poor of Chicago was 3/7 of 1 per cent. He thinks that it may be a better argument than any other he can offer to inquire into the mortality statistics of those institutions that use the pasteurized or sterilized milk reduced in its dietetic value.

5. **Hemorrhages After Nose and Throat Operations.**—The chief point of Bliss' article, with a report of five cases of severe hemorrhage, is the importance in looking into all the conditions of the case when operating on the nose and throat. The question of hemophilia would be enough to necessitate this and the tendency to conceal this infirmity renders careful inquiry all the more necessary.

7.—See abstract in THE JOURNAL, xxxiv, p. 1196.

8.—Ibid., p. 1130.

9. **Heroin.**—Loewenthal has used this in 13 cases, 3 of tuberculosis and 10 of whooping-cough. While sceptical at first as to its value, he has concluded that it is superior to anything we have for the treatment of whooping-cough. "If you have a case of pertussis," he says, "and desire results, use heroin."

10. **Renal Casts.**—Martin and Jones have studied the urine in the Royal Victoria Hospital, Montreal, and found that in a very large number of cases without albuminuria casts have been present. They say that it can not but be believed that their actual cause is devoid of the gravity in prognosis usually associated with their presence, that is, without other significant symptoms. This applies to the hyaline and granular varieties, the epithelial casts being less common and probably of more serious import. From their observations, they conclude that they are generally caused by irritating conditions.

13. **Rheumatic Fever.**—The indications in the treatment of rheumatism are: 1. To prevent fresh chilling of the parts. 2. To keep the affected parts at rest. 3. To modify the condition of the blood and neutralize the irritant action. 4. To prevent, if possible, inflammation of the endocardium and pericardium. The author anoints the joints with olive or some other bland oil, and wraps well with two or three layers of absorbent cotton—retained by a lightly-applied bandage. The patient should always be between woolen blankets in a ventilated room with a temperature of 70 or 80. He relies chiefly on potassium carbonate in 10 to 15 gr. doses every two hours to modify the condition of the blood. He thinks that it has a sedative action on the heart, and cardiac complications rarely occur with its use. He is especially opposed to the use of the salicylates, which he thinks are useless and contraindicated.

14. **Dilatation of the Cervix.**—The various methods of dilating the cervix are noticed by Voorhees, who describes the technique and apparatus of the Champetier balloon, its indications and contraindications. His conclusions are: 1. Dilatation of the cervix is readily accomplished by a hydrostatic bag. 2. The best balloon for it is the modified Champetier de Ribes—it being inexpansible, impermeable, strong and inexpensive. 3. The Barnes bag is unsatisfactory. 4. The operation is easy and not dangerous. 5. The dilatation is rapid.

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6. The uterine contractions always start after its introduction into the uterus. 7. Labor is hastened, and almost always terminates spontaneously after expulsion of the balloon, or the easy extraction of the child is possible. 8. The balloons control hemorrhage in placenta previa, and diminish fetal mortality. 9. The balloons meet all the indications before mentioned.

15.—See abstract in THE JOURNAL, xxxiv, p. 1260.

16. **Dislocation of the Heart.**—Abrams describes certain conditions of the heart and stomach which are not always fully recognized and gives the name of gastrectatic dyspnea to the difficulty of breathing experienced sequential to gastric dilatation. He thinks this condition of dilatation of the stomach has not been sufficiently noticed in the literature as an etiologic factor in pseudo angina pectoris, though he has met with cases that were immediately relieved by the treatment of the stomach or a neurasthenic condition which was primarily a factor in the distention of the stomach by gases. The sign of Ferber—that is, the phenomenon of the circulatory tympanitic stomach-lung region disappearing behind the axillary line if the stomach is normal, but if it is dilated, extending to the vertical column—has been very unsatisfactory. The examination after dilating the stomach with air frequently fails to confirm the existence of this sign. He calls attention to a new sign, viz., a patch of dulness or flatness in the interscapular region on the left side, midway between the spinal column and the interior border of the scapula, varying in size from a silver dollar to the entire space between the scapula and the spine. It disappears to be replaced by the normal lung resonance when the patient leans forward and reappears again with the erect position, and is greatly increased by leaning backward. The cause of the dulness is the compression of the lung by dislocation of the heart upward, and the sign is constantly present. He has convinced himself as to the cause of this by introducing a stomach-tube into the stomach and distending it with air, by which he can invariably reproduce the clinical phenomena. The sign may be confounded with the atelectatic zones sometimes present in this region, but these disappear after repeated forced voluntary inspiration, and are not influenced by the position of the patient. In pericardial effusion the sign of Bamberger is important, which is due to exudate compression of the lung. In the erect position there is a space about the size of a silver dollar at the angle of the scapula, over which increased fremitus and bronchial breathing may be elicited. If the patient bends forward the sign disappears, to reappear when he sits upright.

17. **Intestinal Obstruction After Vaginal Hysterectomy.**—Goldspohn reports several cases from which he deduces the conclusion that it is important to avoid adhesions after vaginal hysterectomy, especially by engaging any portion of the small intestine in the closure of the wound. It is necessarily done in cases where extensive abraded surfaces or septic features are present, but where no peritoneal drain is needed it is a just requirement that the cavity be sealed by coaptation of the edges of the peritoneum. The use of the forceps or clamps, so far as it interferes with such closure, is to be avoided. Secondary operations for the relief of post-operative ileus must be performed early, before infection and perforation of the bowels occur. He gives the symptoms and signs pointing to ileus, abdominal distention without marked tenderness to touch, rhythmical colicky pains, slow pulse that is not wiry, fecal vomiting, vermicular motion of the small intestine seen or felt through the abdominal wall, and increased proportion of indican in the urine.

19. **Dermatitis Venenata.**—This condition, which is most commonly observed as a result of contact with poison ivy or poison dog-wood or poison sumach, may be due to many other causes. The author here enumerates, among others, a case of poison from Japanese lacquer, from buttercups, field daisies, golden rod, wood anemone, nasturtiums, tincture of arnica, kerosene oil, the Seven Sutherland Sisters hair-grower, various liniments, etc., etc. This total of causes has a certain interest, as it affords a number of facts which will help, perhaps, to account for some peculiar eruptions, the cause of which is obscure.

20. **The Exercise Treatment of Ataxia.**—The following points should be strictly borne in mind in using the Frenkel treatment: That it is skill, not strength, that is sought to be developed, and it is necessary to begin with elementary motions, as some of the others that would be prescribed for healthy persons are too complex for the ataxic. However simple the movements, the patient must respond with promptness and accuracy to what is demanded. To inculcate these habits from the outset and reduce the difficulties at each step so that the attention and effort will make success possible and will ensure skill and confidence are, says Putnam, the requisites for good results. Dulness, monotony and fatigue on the one hand and superficiality on the other are to be avoided. He mentions certain methods, such as the use of simple tunes played on glasses or bells, calling numbers with varying rates of speed of the notes the patient must touch that are in this line. He thinks it is not sufficient to let the patient carry out the treatment himself by prescribed rules, and there are some cases which are not adapted to this method, such as those that are mentioned by Collins as being weak, anemic, and in those suffering with pain or frequent crises. Two cases, however, he reports do not quite bear out this statement, as improvement occurred in spite of some of the conditions enumerated by Collins.

22. **Trophic Changes in Consumption.**—These changes enumerated are: Idiomuscular contraction, smallness of the heart, pathologic changes in the pharynx, paresis of the soft palate on the infected side, ear troubles, pityriasis tabescentium, pigmentation of the iris and mamilla, changes in the skin, loss of hair, disturbances of sensibility, fatty degeneration of the liver, gastric disturbances, intellectual impairment, increased sexual desire, and amyloid degeneration. Herbert thinks these due to the action of the bacteria and the nerve terminals being affected. He reports several cases of unilateral trophic symptoms corresponding to those of the lesions of tuberculosis on the same side.

23. **Effect of Electric Light on the Eye.**—Roy calls attention to the various retinal changes due to electric flashes, which he finds are always traumatic, the irritation being produced almost exclusively by ultra-violet rays. According to his own observation, the Welsbach gas light is more satisfactory than any other, but he thinks there should be with it an undershade, preferably white, to mitigate the intensity of the light.

25. **General Anesthesia.**—After noticing the different methods of anesthesia and remarking that the Schleich mixture has lost favor to some extent because of lack of experience, prejudice, and the idea that petroleum ether might be dangerous, while he has found it satisfactory, Maduro calls attention to the relation of the boiling-point to the anesthetic action as pointed out by Schleich and believes that if we could adopt the principle of the relation of the boiling-point to the temperature of the body with the anesthetics we employ we should see far less alarming results. Ethyl bromid possesses the relative boiling-point of 38 C., and he thinks it is the quickest in action and the most rapidly recovered from of all. He will, in the future, publish the results of his experience with this anesthetic. In conclusion he insists on the importance of professional anesthetizers, to avoid mistakes that have occurred in the past.

26. **Physiology of Sleep.**—The theory of sleep here manifested is not a new one, it being that of retraction of the processes of the neurone.

28. **Penetrating Wounds of the Chest.**—Two points are especially noticed: diagnosis and treatment. The free entrance and exit of air indicates perforation of the wall, free bleeding means nothing. Probing should be shunned. The significance of pneumothorax, hemothorax, hemoptysis, are all noted. As regards treatment, Paul finds in the majority of cases that the mortality of penetrating wounds is chiefly due to hemorrhage; in a few cases it may be due to shock. The

expectant treatment, which is largely in favor with physicians is, he thinks, not the best. He believes that the mortality will drop quickly and permanently when men have overcome the present fear of the chest and lungs and will resort to bolder measures. In simple perforation, with or without pneumothorax, and with evidence of but slight injury to the lung, and with moderate and stationary hemothorax, the expectant plan may be followed with the probability of good results. The chief worry is the chance of infection, but increasing hemothorax means great danger. Thus, when an external wound is once sealed or padded you limit retraction of the lung by preventing the exit of the air and give place for a larger effusion of blood. Where free entrance of air does not control the bleeding he would advocate free opening of the chest and packing the entire cavity with gauze and using transfusion with normal salt solution in all bad cases.

31. **Genito-Urinary Technics.**—The special points Eastman mentions are the importance of refraining from immediate withdrawal of the steel sound introduced, as is too commonly done, the advantages of cocainization to relieve the patient in case of marked hypersensitiveness, in irrigating the bladder with the Valentine apparatus or large piston syringe, the importance of bearing in mind that a blunt-ended instrument of larger caliber will sometimes pass where the small end of a small sound fails, protection to the clothes, the use of a weak fresh solution of potassium permanganate from a strong solution of known strength, instead of from crystals, which always produce pain, and the open method of ligation in varicocele instead of the subcutaneous one which is out of date, and the disuse of the clamp in cases of circumcision. The clamp devitalizes the tissues and sometimes prevents early healing by first intention. It is, moreover, useless, since the operation can be made easily and sufficiently without it by using the Pean forceps and cutting off behind the forceps jaws, the compressed tissue in this case being part of that which is thrown away.

35. **Goiter.**—The principal point of Powers' article is the treatment, which is the old method of iodoform injections, using these with true antiseptic precaution. He begins with from 5 to 8 drops of a saturated solution of iodoform in Squibbs' ether injected into the gland, and seldom applied it on both sides at the same sitting. In some cases pain is produced, which lasts, however, only a short time. Sometimes, after withdrawal of the needle, he hears a gurgling sound in the gland, but it seems to cause no inconvenience. As the size of the gland is diminished, it seems to harden, and we have to insert the needle deeper to reach the soft glandular structure. His views are based on an experience with twenty cases, of which sixteen were completely cured and four greatly improved.

37. **Hay-Fever.**—Bate considers hay-fever as a form of arthritism, which he thinks is generally admitted. Among the exciting causes, as well as local irritations, he includes sudden emotion and mental impressions. The treatment should embrace both the attack and diathesis. The treatment of the attack consists in establishing the equilibrium of the circulation, freeing the blood from uric acid, relieving hyperesthesia and removing the exciting cause; for the disturbed circulation such medication as raises the acidity of the blood and renders it incapable of absorbing uric acid. He mentions as also of use internal medication by suprarenal extract for its tonic action on the vasomotor system.

38. **The Drug Habit.**—The theory of the drug habit advanced by Rivers is that there is produced in the cells an accustomization to the drug which, when the supply fails, excites the inclination and that the vasomotor stimulants of sufficient power without serious depressing effects, and elimination of the insomerized drug before the effects of the stimulant disappears are a rational method of cure. He believes that of the drugs hyoscin is the safest and best handled, and he would give it in .01-gr. doses at intervals of one hour until intoxication is produced and then keep up the administration sufficiently to keep the patient in a delirious condition. At the end of twenty-four hours the second step, that of eliminating the drug by pilocarpin, is commenced—⅛-gr. dose every hour until there is full physiologic effect, and then continue its use at intervals of from two to three hours until all the hyoscin symptoms have disappeared. Watch the heart in the meantime and meet any glandular symptoms with atropin or morphin. If, at the end of this time, the patient expresses absolutely no desire for the drug the work is done, if, however, he still feels the need of his accustomed stimulant the treatment should be begun again. There is apt to be a bilious diarrhea following this method, which is usually easily controlled by bismuth or, if necessary, resorcin. He does not include alcoholic cases in this method of treatment, as the indications vary somewhat. He begins in such cases with a mercurial purge, and then proceeds as before, though using less hyoscin and pilocarpin. He has used this treatment in twenty-three cases, of which fifteen were alcoholic. They were all relieved with but one exception. He has had two bad results, both alcoholic, neither of them, he thinks, due to the treatment.

41.—See abstract in THE JOURNAL, xxxiv, p. 1487.

42. **Ligation of the Abdominal Aorta.**—Keen reports a case of ligation of the abdominal aorta for aneurysm in which the patient lived forty-eight days, collateral circulation having been established. The death was due, as in other cases, to cutting through the vessel by the ligature. To prevent this accident, which seems almost universal, he has devised an instrument for the compression of the aorta, which he illustrates, and which avoids the danger of pressure on the thoracic duct and requires only the opening of the abdomen and its application to the vessel. This instrument has been experimentally tried on dogs and the following are the conclusions deduced: 1. That in dogs paralysis of the hind legs follows complete obliteration of the aortic stream. 2. That the paralyzed parts may regain their entire health even after forty-eight hours' compression. 3. That three and one-half hours of compression will not interfere with the complete restoration of the paralysis. 4. That at least, after twenty-four hours, and possibly less, the collateral circulation may re-establish the continuity of the circulation. 5. That the aorta may be clamped in the dog for one hundred and ten hours, and yet the collateral circulation be established sufficiently to nourish the posterior extremities. 6. That the clamp can be placed on the aorta, at least in the dog, either in separate parts or as a whole. 7. That it can be readily removed without injury to the aorta.

43. **Granular Degeneration of the Erythrocytes.**—The granular changes in the red corpuscles that carry any certain disease, such as chronic lead poisoning, malaria, anemia, carcinoma and septic disorders, are observed and discussed by Grawitz, who concludes that their presence or absence is sometimes of considerable importance, as it permits us to decide on the etiology in certain anemic conditions and enables us to determine whether true blood-poisoning exists or whether the anemia is to be considered as but one symptom of a general cachexia. Granular degeneration is only a symptom which must be taken with other symptoms of the disease. The recurrence of these granulations is of no significance, but in certain cases of lead poisoning which are hard to recognize, also in those cases where the existing anemia is to be referred to malignant neoplasm, chronic nephritis or similar diseases, they are of value. In many cases granular degeneration appears as the first definite sign of anemia, where it is of special importance. In other cases, like tuberculosis, the anemia is not attended with this symptom and, therefore, we must not here look at it as depending on the destruction of the blood-cells, but on the involvement of the blood in the general tissues, that is there is a true oligemia, a reduction of the general amount of the blood. He thinks that a high temperature is sometimes its cause, and in this respect it is similar to that of many cases of tropical anemia.

45. See last week's JOURNAL, p. 692.

52. **Gonorrheal Pyelonephritis.**—The report of a case, with careful autopsy and bactericidal examination, in which

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only the gonococcus was found, has led Lewis to question the reported rarity of the condition from this exclusive cause. He argues against this, showing that it is practically possible to have ascending infection by continuity, as in the case he reports, or through the lymphatics, or by general infection or metastasis. He refers briefly to a case of gonorrheal rheumatism in which cultures of the blood produced abundant colonies of gonococci responding to the tests, and succeeding generations of germs were cultivated from these.

55.—This article has appeared elsewhere. See THE JOURNAL of September 1, title 31, p. 583.

57. **Hearing of Deaf Mutes.**—Bezold reports the results of testing, with an improved apparatus, a number of deaf mutes that had been formerly examined, and he finds the number of totally deaf less than before, though two of the cases had lost considerable hearing in the interval. The details of the test are given and the results indicate that special care assured to the partly hearing and partly vocal deafmutes will increase not only what speech and hearing they may have, but also that this fraction of normal hearing power can be utilized in teaching sound language.

60. **Nasal Empyema.**—The conclusions of Cobb's article are given as follows: 1. That the whole chain of catarrhal symptoms of the nose, the nasopharynx and of ears is due to empyema of the nasal accessory sinuses. 2. That this empyema is the result of an infective inflammation of the accessory sinuses in which the drainage is insufficient. 3. That the malformation of the posterior end of the middle turbinate, which he has described in this paper, plays an important part in the establishing of the nasal empyema which causes postnasal catarrh. 4. That chronic catarrhal inflammation of the middle ear may result from the catarrhal condition of the nasopharynx, either by extension of the disease, by continuity of tissue, by the forcible blowing of the irritating secretion into the middle-ear cavity, or by closure of the Eustachian tube from involvement of the mucous membrane in or around its entrance. 5. That there is no evidence of chronic catarrhal inflammation of the middle ear is caused by obstruction to nasal respiration, unless the obstruction is associated with empyema of the accessory sinuses. 6. That those cases of chronic catarrhal inflammation of the middle ear which are caused or made worse by nasopharyngitis can not be cured until the nasal empyema which causes the nasopharyngitis is first cured, and that mechanical treatment directed to the ears is only palliative and does not free the patient from the danger of an acute exacerbation of the disease. 7. That many cases of nasal empyema may heal spontaneously under favorable conditions, and the more recent the case the more probable it is that this will occur. 8. That the accessory sinuses have a tendency to free themselves of inflammation, and that treatment should be directed to assist nature to this end. 9. That it is possible to cure practically every case of nasal empyema, and therefore every case of nasopharyngitis depending on it.

72. **Normal Salt Solution in Typhoid.**—Andersen reports in detail a case of typhoid with severe hemorrhages, causing collapse, in which relief was obtained by the use of transfusions of normal salt solution. Several other cases were treated similarly with benefit, but none so bad as the one reported. He does not find reports of similar treatment for hemorrhage of the bowels in typhoid. In his case the operation was done in a tent without antiseptic appliances, and some abscesses followed, which he attributes to the fact of the saline solution not being filtered.

74. **Pulmonary Tuberculosis.**—In the treatment of pulmonary tuberculosis, Whalen considers guaiacol first among the drug preparations. He has been in the habit of giving it, 5 minims in capsule after each meal, with benefit. Next to this, he would use oil of cloves similarly administered. His experience with this has also been favorable. Iodin is of some use in certain cases, but inferior to the drugs mentioned, and is of most value when used by inhalation. Tonics such as strychnin, arsenic, phosphorus or cod liver oil are useful and should not be overlooked. Of late he has been using Armour's red bone-marrow in place of the malt and cod-liver oil, and finds it a valuable remedy. Alcohol in the early stages is not advisable, later it may be of benefit, and should be chiefly prescribed in the form of malt liquors. The diet should be as nutritious as possible, and special attention given to the digestion and assimilation. Internal medication can be aided by inhalation of various drugs, among which he places formalin first, though the essential oils of cinnamon, cloves and thymol are of value, as well as iodin, cod-liver oil, etc. Moderate exercise, together with lung gymnastics, is also spoken of with favor, as are cold applications to the chest followed by vigorous friction. The diarrhea which occurs he has been able to control with bismuth, and night sweats with atropin. Hemoptysis, as a rule, requires no treatment, though if necessary morphin is valuable, and he sometimes gives aconite to reduce the blood-pressure, also nitroglycerin. He has faith in the use of serum treatment, or tuberculin, and his experience with the compressing method of Murphy has not led him to have great hopes of its curative effects. Other subjects mentioned are the climate and altitude of various health resorts, and their respective merits are discussed.

75. **Suggestion Without Hypnotism.**—Moyer considers suggestion, well directed, patiently and systematically applied, a very important element in many diseased states. Hypnotism, on the contrary, has many objectionable features, and he thinks there is little use in inducing the hypnotic state. He does not say it is always useless, but it should not be practiced in a routine way, and when employed it should be only by medical men.

81. **Obstruction of the Upper Air-Passages.**—The general subject of obstruction of the nasal passages, etc., is gone over by Gardner, who finds it, regardless of cause, a distinct pathologic entity, producing certain well-defined disturbances of nutrition, alterations of the bones and contour of the face and palate and disturbances to sleep, predisposition to infection and chest deformities, as well as deafness, either from pressure or Eustachian involvement. With the attainment of maturity these conditions may become inoperable and results permanent. He holds there is hardly any class of cases where prompt treatment is as beneficial or procrastination more damaging.

82. **Head-Last Presentation.**—In this communication Hunt refers to a method of rapid birth of the head by placing the patient on the left side and producing pressure from over the fundus toward the buttocks. He claims that this method will result in saving the lives of many children. The pressure is toward the inlet of the pelvis and the possibility of injury is comparatively slight.

84.—See abstract in THE JOURNAL of July 14, p. 116.

86.—Ibid.

87.—Ibid., p. 115.

88.—Ibid., p. 116.

89.—Ibid., p. 115.

90. **Cold in Pneumonia.**—The use of cold for therapeutic purposes in pneumonia forms the subject of Rees' article, in which he reviews the opinions of various authors on the subject. He finds that it is valuable for pain in this disease, as its anodyne action has no effect on checking elimination, disturbing digestion, impairing the appetite or depressing the nervous system. It is also useful for the relief of general restlessness and delirium for the same reasons. The ice-bag slows and strengthens the heart-beat, and the pain being relieved, the patient unconsciously takes deeper breaths. The major argument for its use, however, is the effect on the circulation. It limits the congestion and consequent exudate and prevents the involvement of large areas of tissue. Sustained cold applied to the skin relieves the tendency to exudate and excessive diapedesis of leucocytes: 1, by constricting the cutaneous arterioles, and, 2, by setting up compensatory dilatation in the pulmonary and bronchial arterioles by the means of which the flushing out of the local stasis is favored. It has also a valuable, and by no means a slight, action on the gen-

eral temperature and acts as a safe and natural diuretic. The number of ice-bags used should depend on the size of the inflamed area and the stage of the disease; enough to cover the inflamed lobe should be used. It is not, however, applicable to every case, and should not be employed in young children and in the aged where the system is already depressed or weakened from causes prior to or complicating pneumonia. In very young children or in the old or feeble, where the strength is rapidly diminishing and cardiac and respiratory failure threatened, a cold sheet wrapped closely around the trunk and left there for a few minutes and reapplied at intervals of one or two hours is a powerful stimulant. Cases have been under his observation where this seemed to save life.

93. **Laceration of Urethra.**—The motive of this study, as stated by the author, is to ascertain the accepted management of the catheter after laceration of the male urethra and what is the prevailing opinion as regards suturing the laceration. He reviews the different authorities and their different views and reports a case. From his experience and reading he deduces that there is not sufficient positive information regarding the time the catheter should be retained. In Leipziger's case, if he had retained it for fourteen or twenty-one days at the first, instead of removing it at the seventh and then returning it for thirteen days more, the results would, he thinks, have been better. Leakage through the perineal wound need not cause any anxiety, as fresh urine does not harm the wound if it can be cleansed, and it makes no material difference whether the wound heals around the catheter by suture or granulation.

101. **Diaphragmatic Hernia.**—On the basis of a case successfully treated, and a study of others reported, Walker comes to the following conclusions: 1. In all cases of so-called internal strangulation one should always think of the possibility of a diaphragmatic hernia. 2. When the physical examination reveals the diaphragmatic hernia as probable, an operation is imperative when the symptoms of obstruction are present. 3. In recent cases, if the diagnosis has been made early, laparotomy is probably the better operation. 4. In old cases, on account of the difficulty of reducing the gut, ligating the sac and stitching the rent in the diaphragm, the transpleural route is preferable. 5. If, after making a laparotomy, the gut can not be reduced, a thoracotomy is justifiable.

102. **Hysterectomy.**—The chief point of Haughey's article is the plea for the complete operation of hysterectomy, instead of removing the ovaries in cases of chronic disease of the appendages. He does not see the use of the removal of the appendages and not the uterus. He believes the results of the combined operation are in every way more satisfactory than that of the single one which may require subsequent removal of the uterus afterwards.

117. **Gunshot Wounds.**—Osborn pleads for the operative interference in gunshot wounds of the abdomen. He thinks that the mortality would be greatly reduced if this were done, and reports cases where he has seen the "do nothing" treatment result in rapid death from perforation of the arteries, which might have been readily relieved by abdominal section. The anesthetic will also be the best treatment for shock.

120. **Vaccination.**—Lehmann's improved method of vaccination consists in gently stroking the surface of the skin, after making it tense, with the vaccin point, steadily increasing the pressure until the skin is rendered anesthetic, or is hypnotized, so to speak, by this local pressure and gradually increasing friction. Then, when it is sufficiently scarified, the two sides of the vaccin point are moistened with rainwater and passed over the denuded area, and a bit of tissue paper held over the spot until it is dry. Lehmann claims that this method minimizes irritation and is altogether in various ways better than those commonly used.

125.—This article has appeared elsewhere. See THE JOURNAL of July 14, title 95, p. 118.

132. **The Prophylactic Douche.**—The writer contends, after giving a brief review of the literature upon the subject, that the weight of testimony is in favor of discarding the douche as a routine measure, although some observers still adhere to their former contention as to its benefits. Even the preliminary douche is of doubtful utility, as the vaginal secretions possess bactericidal properties, they are useful and protective, and the various species of micro-organisms will meet with more timely neutralization without the douche than with it. The secretions may contain a great number and variety of bacteria, but usually they are non-pathogenic or produce but a moderate rise in temperature. Severe puerperal fever and death is generally due to infection from without, but it may have a cystogenic origin. Recent investigations go to show that the blood, the lymph and the tissues generally are not always sterile. In the puerperal state there is a greater liability of an accumulation of bacteria within the tissues than at other times, and nature has provided an extra channel of elimination for just this condition, and one of the chief provinces of the physician is to aid nature in this elimination.

141. **Hypnotism.**—Martin defines hypnotism as the effect of suggestion made during sleep. Simple suggestion is an impression made either when awake or during sleep. He divides all classes of cases in which suggestion or hypnotism can be used into those in which nothing does so well and those in which it will be of great assistance to other treatment. Among the first of these he includes persistent insomnia, nausea of pregnancy, pressure pain of pregnancy and wrenched back. Those where it may help are multiple. He insists on the importance of using hypnotism only rarely, and then when the case demands it. He advises the physician to read Moll's work first, then Bernheim, and then he will probably be well enough placed on the subject to read more extravagant authors without believing all they say.

FOREIGN.

British Medical Journal, September .

Treatment of Malaria by Quinin.—In this discussion, in which a number of prominent English and Anglo-Indian physicians took part, the question of the prophylactic action of quinin was taken up. Dr. Duncan reviewed the statements of others chiefly, but found as a general conclusion that there is little doubt that quinin does exert a prophylactic action and its curative action is undeniable. It acts probably by destroying the organism, though there are several theories as to how it is done; whether it works on the spores or on the large intracorpuscular forms or stimulates the phagocytes is as yet not absolutely decided.

Dr. Buchanan, superintendent of the central gaol, Bhagalpur, Bengal, had submitted a series of questions to the medical men in India and received replies. Nearly all were in favor of the prophylactic issue of quinin; some of them have been criticised, hence several special papers were published by the medical officers reporting experiments made with special reference to meeting the criticisms. The results are strongly in favor of the prophylactic issue of the drug. If the statement of Capt. Fearnside, in the *Indian Medical Gazette* of September, 1899, can be substantiated that it prevents the formation of crescents, a very important argument in its favor will be established.

Buchanan has been giving for five years daily a dose of quinin or cinchonidin to, on an average, over 16,000 persons for the four months of the rainy season, and has never seen a single bad result.

Dr. Robert Fielding-Ould disagrees entirely with the idea of giving a regular dose of quinin to prevent malaria. He finds that it disturbs the peptic digestion and is apt to lead to congestion and torpidity of the liver. There are exceptions, he admits, where men can take the drug in quantities for years, but these objections, he thinks, are sufficient to condemn its general use. In conclusion he mentions quinin hemiglobinuria, of which he claims a number of cases are on record.

Other partakers in the discussion expressed varying views. Dr. Manson considered the prophylactic action only a phase of its curative effect and recommended the use of the microscope in future experiments with quinin as a prophylactic. Dr. Rees, superintendent of the London School of Tropical Medicine, found that its prophylactic action, while it did not prevent,

markedly reduced the number of attacks and lessened their severity and mortality. He would use it himself if he should return to a malarial country. The majority of the authorities seemed to be in favor of its prophylactic value.

On the Metamorphosis of the Filaria Sanguinis Hominis in Mosquitoes. S. P. JAMES.—The writer reports his own observations and experiments on the metamorphosis of filaria. He thinks that the statement of Dr. Manson that he was able to observe complete metamorphosis in seven days was probably due to the fact that there are a number of species of mosquitoes, some of them much more favorable hosts than others, and that Dr. Manson's experiments were made with one of the latter. He reports his own experiments, showing how he has found the filaria in the proboscis and apparently favoring the view that the filaria pass directly from mosquito to man without having first existed for some time in water. He believes that the genus Anopheles are capable of acting as efficient hosts as well as the species of the Culex.

Notes on the Etiology of Filariasis.—Maitland disagrees with the view that the common origin of filariasis in the human subject is due to mosquitoes, and holds rather that it is a water-borne disease. He adduces in favor of this the fact that the white race in the tropics is comparatively immune, while the native population suffer, that certain communities having a common supply of drinking water suffer severely from the disease while others taking their supply from different sources are not affected. The immunity of the Europeans is due to their habit of drinking only boiled or filtered water. As an example of water transmission he reports the case of four Eurasian boys who took to bathing in and drinking the water from a certain pond and became simultaneously affected with filariasis. He asks: If the theory of inoculation is correct how is it that persons affected with filariasis can live in intimate association with others and not infect them?

A Discussion on Ankylostomiasis.—The anemic affection attributed to ankylostomiasis is discussed by Giles, who has investigated the subject in Assam; there, the mortality is very high alike amongst the indigenous inhabitants and the imported laborers that come to work in the tea plantations. The question whether this increased mortality is due to malaria plus ankylostomiasis advanced by some authors, he does not discuss; his aim was to study the life history of the worm. The recent view as to its absolute harmlessness, he thinks, is erroneous. Of course, where a large portion of the population suffer from the disease many healthy individuals will also have the parasite without necessarily becoming its victim. His own impression is that it is responsible for a formidable mortality and a still greater amount of sickness wherever it exists.

Fearnside has investigated the subject among convicts and finds that about 72 per cent. of the persons in the district investigated harbor the parasite and remain in good health. He thinks that the figures show that the effects of ankylostomiasis are for the most part secondary and not primary. They seldom occur in such numbers as to cause true ankylostomiasis and the bad effects are mainly the results of such disorders as malaria, dysentery, etc., complicated by ankylostomiasis.

Rogers recognized the anemia produced by long-continued small loss of blood through the gastrointestinal mucosa caused by the presence of several hundred ankylostoma acting for several months, or by a still larger number acting for a short time. This is ankylostomiasis, and it is characterized by the reduction of hemoglobin to nearly twice the extent of that of the red corpuscles; while in the disease called kala-azar and in malaria the red corpuscles and hemoglobin are reduced in a parallel manner. This makes a difference in the treatment of the two forms of anemia; in the one the hemoglobin is being drained away and can be replaced only with great difficulty, especially in vegetable-eating people, and in the other hemoglobin is not lost to the system but is stored up in organic combination in the liver and spleen, whence it can be reabsorbed to restock the red corpuscles as they are turned out. Hence, in ankylostomiasis iron is urgently indicated, while arsenic is of less importance; but in the other form arsenic and bone-marrow are specially indicated, while iron is not urgently required.

Baker notices the prevalence of the condition in Burmah, which he attributes to the habits of the population and absence of night-soil sanitation, thus producing infection. Ross holds that the idea that a certain large number of parasites are required to produce the mischief in this condition is erroneous; 50 ankylostoma might destroy a patient already debilitated by other disease or starvation, and he mentions the possibility of the parasites having also toxic effects.

Tropical Liver Abscess. KENNETH MACLEOD.—Sporadic evacuation of abscesses of the liver most commonly occurs along the pulmonary route, the principle of progress in the direction of less resistance coming into play. Whether the abscess bursts into the pleural cavity or erupts into or erodes the lungs or produces a secondary abscess must depend on the extent and strength of protective pleuritis to which the progress of pointing has given rise. When the discharge into the pleura is primary the physical signs are characteristic and exploration can make certain the diagnosis. There is then but one line of treatment, that is, to make a free opening and drain under antisepsis. When it finds its way into the substance of the lung, symptoms of diaphragmatic pleurisy and lung consolidation are superimposed on the liver symptoms and if the latter are well marked exploration through the liver and direct drainage by incision is the proper treatment, but frequently the expectoration of a large quantity of pus is the first sign. In favorable cases it may diminish and the patient may make a complete recovery, but in other cases the pus refills and death with hectic symptoms occurs. The question arises, What should be done in these aggravated cases? He criticises the text-book instruction to always incise and drain through the liver, and urges that in these cases it should be treated as one of lung cavity and exploration and incision made through the chest. He bases his opinion on two grounds:

1. While the lung is undergoing destruction, in the liver repairing changes are taking place. 2. He has frequently seen that method followed without success. His objection is, to sum up the matter in a few words, that in the old-standing cases of lung lesion consequent on hepatic abscess the pathologic burden has been transferred from the abdomen to the chest and the relief measures must be applied accordingly, the lung lesion treated according to special indications of the case, and the liver is left to take care of itself.

Subphrenic Abscess. JAMES CANTLIE.—In this article on subphrenic abscess Cantlie describes the symptoms and diagnosis, which may be confused with gall-bladder inflammation, and when the history is not obtainable the surgeon must be prepared to meet either of the conditions. The prognosis is generally good. The treatment consists in simply tapping with a large trocar and drainage by a large tube, but incision when adhesions are known to have formed is free from danger, and in one case in his observations it was eminently satisfactory. He demonstrates in his article the position of the inferior vena cava and states that by a study of frozen sections it is possible to ascertain how deeply the needle of the aspirator or trocar can be carried into the liver without causing untoward consequences from hemorrhage. He finds in a body with a circumference over the hepatic area of 32 inches that the center of the inferior vena cava is from 4¼ to 5 inches off the surface, in a line drawn horizontally from the neighborhood of the xiphosternal articulation to the angles of the ribs behind. Before commencing an exploratory puncture of the liver, therefore, Mr. Cantlie recommends that the circumference of the body be taken, and, starting with the above measurement as a basis, a fairly accurate idea of how deep the puncture may be carried is ascertainable. In a body measuring 32 inches in circumference, it is not safe to penetrate deeper than 3¾ inches in a horizontal direction from anywhere in the line mentioned. For every inch of circumferential measurement above or below the 32 inches, ¼ inch may be added to or subtracted from the depth it is safe to penetrate. Abstraction

of blood in inflammatory hepatic derangements Mr. Cantlie regards as most salutary. When the needle enters a large vessel in the liver substance, as judged by the free flow of blood in the bottle, he allows the needle to remain until 6 to 10 ounces of blood are withdrawn. No ill effects follow tapping a vein in this position; it is only when the inferior vena cava, or the trunk of the portal vein before it breaks up in the liver, is wounded that a dangerous hemorrhage is likely to follow. Every puncture of the liver by a needle causes a slight or even considerable flow of blood subsequently into the peritoneal cavity, as he had been able to prove clinically; but in all probability it was this very flow of blood which contributed to the marked benefits usually following liver puncture. The dangers of hepatic hemorrhage are confined to puncturing the inferior vena cava, the extrahepatic portion of the portal vein, or penetrating a mass of malignant tissue occupying the liver.

The Diagnosis and Surgical Treatment of Tropical Liver Abscess. W. JOHNSON SMITH.—The writer holds that exploratory puncture is preferable to laparotomy in case of tropical abscess. He sees no good grounds for opening the abdomen unless the repeated use of the needle and syringe has failed. If the characteristic fluid of a liver abscess be drawn up, an operation for allowing it a free discharge should be immediate. Thoracotomy almost always implies a transpleural incision, and while he has found that in an abscess in front requiring an operation adhesions usually exist, yet in the more frequent form of posterior abscess the lung and liver are usually found quite free, and their respective serous cavities quite open. Consequently in this operation we expose two large serous cavities and that doubles the risk of infection. There is also a risk of permitting ingress of air into the pleural sac, causing lung collapse. Notwithstanding these risks, drainage in suitable and favorable cases has on the whole been satisfactory. The surgeon must guard against the risk of infecting the pleura and peritoneum. He has followed the plan of making a thorough incision in both diaphragm and liver so as to allow a full and uninterrupted discharge of the fluid contained in the abscess. He thinks it would be well to apply our tests for both general and local leucocytosis in every case of liver abscess to see if leucocytosis is present.

Annales de la Soc. Med.-Chir. de Liege, June.

Foreign Bodies in the Lungs. E. GULIKERS.—A young man supposed that he had swallowed the metal tip of a pencil, about an inch long, but the total absence of pharyngeal reflexes suggested that it might have passed into the air-passages, and a skiagraph showed it horizontally lodged near the eighth rib. The patient coughed and expectorated in the morning, but was not otherwise disturbed by its presence. He was advised to lie on an inclined plane, head downward, which he did for eight days. At the end of this time he felt the foreign body slip down into his throat and, as instructed, he supported himself on his arms, made slowly a deep inspiration, and then, uttering a bass sound—to open his vocal chords—expelled the foreign body without coughing. In the second case a child had inhaled a toy arrow from a blow-gun—a metal pin 1.75 inches in length, with a tuft at the head. It was expelled six months afterward with a vomica, after an interval of recurring pleurisy, hemoptysis and an almost constant cough.

Bulletin de l' Academie de Medicine (Paris), August 21.

Neuropathic Hematuria. E. LANCEREAUX.—Hemorrhage may occur in the urinary organs of men and women and in the genital organs of the latter, independent of any material disorder, and due solely to a disturbance in innervation. They are more frequent in neuropathic patients and are generally preceded by fatigue, exposure or violent emotion. The treatment should be addressed to the nervous system, after controlling the hemorrhage, and quinin will be found extremely useful, combined with hydrotherapy. He cites several personal cases in which .8 to 1.5 gm. of quinin sulphate arrested the hematuria in a few days. His patients were mostly rheumatic or hemorrhoidal subjects, and he has noticed that the suppression of hemorrhoidal hemorrhages is a frequent preliminary to hematuria. Zambaco has also noted this latter fact, and mentions that injecting the veins of the rectum in a post-mortem preparation from a hemorrhoidal subject is liable to distend simultaneously the veins in the bladder, which, in one instance, were dilated to actual varices. He concludes by stating that the prognosis of neuropathic hematuria is not grave. Its recurrence may lead to anemia, but symptoms of debility are rare and less pronounced in hematuria from vasomotor disturbances than in hemorrhage of any other origin.

Echo Medical (Lille), August 26.

Traumatic Valvular Lesions of the Heart. CASTIAUX AND LAUGIER.—Both of these authors are prominent in legal medicine and presented this communication at the International Medical Congress. The main points are as follows: Violent contusions of the thorax, whether from a fall or blow, or compression between two resisting bodies, are capable of producing a valvular lesion even in a healthy heart, and still more easily if the organ be diseased. These valvular lesions are almost always immediate—rupture or laceration—but they may also occur later, and only appear subsequent to a myo-endocarditis resulting from the traumatism. When they are immediate they produce insufficiency of the injured orifice from the start, liable to be complicated later with pathologic processes from lesions of the endocardium, of some other orifice or of the large vessels of the heart. The aortic is the valve most frequently injured from this cause—25 out of the 36 cases known to date; next the mitral, with 8, and exceptionally the semilunar with 2 and tricuspid with 1. The physical signs are about the same as those of a spontaneous valvular lesion, but the murmurs are more intense and prolonged and the flaps of the valve or torn chordæ floating in the blood current impart a peculiar tone and vibration to the morbid sounds. The prognosis of traumatic insufficiency is more serious than that of spontaneous lesions and the course of the affection is more rapid. The organ is overwhelmed suddenly. Long survival is, however, possible and even recovery, although extremely rare. When a cardiac affection is the result of external traumatism the responsibility of the author of the injury is singularly aggravated. An unpublished case is described in detail. Besides intense signs of aortic insufficiency, there was a holodiastolic, musical, slightly piping "steam tug" murmur.

Branchial Fistula of the Neck. O. LAMBERT.—The fistula in question was undoubtedly congenital, but remained latent for fifty-six years, when some infection produced a small abscess in it, with perforation outward, thus disclosing its existence for the first time.

Nord Medical (Lille), August 15.

Connection Between Pure Mitral Stenosis and Heredo-Syphilis. DUVIVIER.—The etiologic influence of inherited syphilis in the production of pure mitral stenosis was unmistakable in thirty cases which Duvivier has collected in the literature. It was likewise probable in two cases he had occasion to observe in Combemale's service. He agrees with Lancereaux that teratology of the heart is merely the pathology of this organ during intrauterine life, and with Huchard that pure mitral stenosis is always congenital.

Pneumonia in the Aged. LEMOINE.—Pneumonia in a fresh and well-preserved elderly person runs the same course as in a young adult, but in senile conditions, or when excesses have ruined the constitution, the course of the pneumonia is quite different. The temperature is less by a degree or more than that of typical pneumonia in the adult. The expectoration is less, the sputa greenish and dirty, and the lesions localized at the apex. Sometimes auscultation is entirely negative; the focus is deep and covered with emphysematous portions of the lung. There are seldom crepitant râles; the large subcrepitant râle is ordinarily the only one to be heard, and this may not make its appearance until the close of the disease. Some cases progress to the fourth or fifth day with no manifestations except dry tongue, red at the edges, and temperature not over 38.5 C. The first indication is to diminish the afflux of blood and relieve the distress in breathing. The only revulsive that can be used on these feeble subjects is extensive dry cupping, daily repeated. Puncture is hazardous and respira-

tory stimulants are preferable. For this Lemoine administers 2 to 6 gm. of ammonium acetate in syrup during the twenty-four hours. It acts directly on the respiratory centers and increases the diuresis. He sustains the heart and general system with digitalis and alcohol. In case of persons habituated to the use of alcohol, musk will be found a powerful substitute tonic. He prescribes .5 gm. musk mixed with one yolk of egg and 150 gm. water, given by the mouth. Or it can be taken in two cachets, .25 gm. each. Give liquid food if possible, preferably milk. It is important to facilitate expectoration, but the usual measures can not be used in these cases, and the best results are attained by administering a stimulant, such as strychnin.

Presse Medicale (Paris), August 22 and 29.

False Cures of Pleurisy. E. SERGENT.—A young woman with metapneumonic interlobar pleurisy was apparently cured in consequence of the spontaneous discharge from a vomica auscultated in the middle, posterior axillary region. Pure cultures of pneumococci were obtained from the pus. Two weeks later her right arm was temporarily paralyzed. Although otherwise healthy, the persistence of a vesicular murmur at the point of the vomica suggested that it had not completely healed. During the following year this opinion was confirmed by a rebellious cough, occasional spitting of blood and pus, fever and other symptoms indicating possible tuberculous infection, although the apices were normal. Seventeen months after the primary vomica the patient coughed up a bunch of "membranes and skin and something that looked like strips of tripe." From this moment all symptoms ceased, and the cure has been radical and permanent.

Diffuse Symmetrical Lipomatosis. C. PESTEMAZOGLU.—Two cases are described, and one illustrated, showing the large symmetrical lipomatous masses above the nipples, front and back, and on the median line above, also on the neck. One of the patients had been operated on a few years before and had had a large interscapular lipoma removed. They begged to be relieved of their encumbrances, and five of the masses were removed from one patient. They were not encapsulated, and it was impossible to make the operation complete, as the fat extended behind the muscles, etc. The presternal mass had already commenced to grow again two months after the operation.

Progres Medical (Paris), August 25.

Graft of Severed Terminal Phalanx of Thumb. SALOMON.—In a number of cases in which the end of a thumb or finger had been totally severed, Salomon failed to obtain complete restoration of the severed portion until he commenced to use asepsis instead of antisepsis. Since then he has had invariable success, even when a large portion of the finger had been lost. He first keeps the hand for three-quarters of an hour immersed in very hot sterilized water, occasionally renewed, to which a little alcohol has been added. Four catgut stitches then hold the severed portion in place and the finger is packed in cotton.

Semaine Medicale (Paris), August 29.

Overlapping of Auricular and Ventricular Systoles. POTAIN.—The propulsion produced at the apex during the moment preceding the closing of the auriculo-ventricular valves, and the first bruit is attributed by Potain to the distension of the ventricle by the systole of the auricle. Others ascribe it to the systole of the ventricle itself, and Bard has recently announced that it is due to the overlapping of the systoles, the ventricular systole anticipating the end of the auricular systole, causing what he calls the *"chevauchement des systoles."* It is due, he believes, to the resistance to the closing of the mitral valve on the part of the hypertrophied auricle. He states that palpation reveals a characteristic hardness at the precordial region just before the closing of the valves, which indicates a contraction of the ventricle—an active and not a passive phenomenon. It does seem as if this "dome shock" were too considerable to be attributed to the contraction of the "despised" auricle alone, as Potain admits. He observes that if he trusted to his impressions alone he would be dubious, but that the Marey instruments positively establish that the true début of the ventricular systole and the true first bruit are synchronous; that the presystolic thrill is a direct result and a sign of mitral stenosis, and that—in spite of appearances to the contrary and his personal impressions—he is convinced that the "choc en dome" is a phenomenon of auricular origin.

Centralblatt f. Chirurgie (Leipsic), August 25 and September 1.

Thermorphor With Ether Mask. LONGARD.—The ether mask described by this author in the Centralblatt, No. 48, 1898, was found to have the disadvantage that the air condensed inside and ice crystals were liable to form from the evaporation of the ether. This is obviated by a ring-shaped thermophor made to fit around the edge between the netting and the cover, which keeps the temperature considerably above the freezing-point.

Rattan Splints. H. SARFERT.—Wicker-work splints have been found desirable from every point of view by Sarfert, who recommends them on account of their lightness, durability, inexpensiveness, elasticity and porosity for military, general hospital and emergency use.

September 1.

Plastic Restoration of Lower Jaw. W. SYKOFF.—A chin was restored after an extensive defect consecutive to noma, by cutting a rectangular piece out of the largest side of the lower maxillary bone and slipping it along to bridge the defect, the farther end resting in a groove hollowed out for it in the other half of the bone. The results were highly satisfactory. A fragment of rib, with the periosteum, would probably have done equally well.

Deutsche Medicinische Wochenschrift (Leipsic), August 30.

Queirolo's Method of Outlining the Stomach. P. EDEL.—Comparison of the findings with Queirolo's method and with the other methods in vogue shows that they are identical in the results attained. The former may prove useful at times as a supplementary measure, but in general, inflating the stomach with CO_2 generated by tartaric acid and sodium bicarbonate is sufficient and reliable. Queirolo introduces a sound into the stomach, the lower end of which is inserted in a small bladder. The sound communicates above with a two-branched rubber tube. One branch connects with a Marey drum, the other with the outer air, and through it the bladder is inflated. Percussion over the abdomen does not stir the index, but the moment the limits of the stomach are reached the drum records it at once. The organ can thus be outlined with comparatively little trouble. In one case of stenosis of the pylorus it was impossible to locate the stomach limits by any other method. Percussion is not reliable with an entirely empty stomach. Air or fluid is necessary for the test.

Differentiation of Aneurysms With Radiography. E. GERAUER.—A patient in Grawitz's service, with evidences of an intrathoracic tumor or aneurysm of the aorta, showed on the fluorescent screen a distinctly pulsating tumor just above the heart. The diagnosis of aneurysm of the aorta was made, but the autopsy disclosed a carcinoma of the esophagus, with perforation into the lung, and metastases above. The left bronchus had become adherent to the arch of the aorta, inducing Oliver's sign. The simulated pulsation must have been caused by the rising of the metastatic tumor with the systole of the aorta, and the sidewise movement of the primary tumor with the systole of the descending aorta, to which it was adherent.

Diphtheritic Vulvo-Vaginitis. L. SILBERSTEIN.—A case was reported in 1898 of gangrenous vulvo-vaginitis cured with diphtheria antitoxin. It proved equally effectual in the case described in this communication. Two injections of 1000 units were made, it being known that the patient, a child of 4½ years, had been exposed to diphtheria.

Muenchener Medicinische Wochenschrift, August 28.

Significance of the Diazo-Reaction in Tuberculosis. P. F. BECKER.—A positive reaction to the diazo test is not necessarily of serious import. It sometimes occurs in tuberculous subjects in connection with some slight intercurrent complication such as diarrhea, and consequently an isolated

positive reaction should not be accepted as evidence of a grave prognosis under all circumstances. When it occurs in a disease not usually accompanied by it a complication of an infectious character may be assumed. Certain cases respond with a dubious reaction to the test. The green color is most intense in these dubious cases when positive, but there is a slight greenish tint even with a negative reaction.

Acute Osteomyelitis of the Atlas. EICHEL.—Two cases are described in detail, the diagnosis based on the pains, increased by jolting in a wagon or car, the attitude of the head and the neuralgic pains, in one case in the region of the supraorbital nerve. Temperature 38.4 C. Eichel observes that with these symptoms and swelling of the back of the neck, he would operate without waiting for fluctuation, in order to forestall perforation of the pus into the spinal canal. In case tuberculous alterations are discovered he suspends the operation at once and resorts to immobilization and extension as usual, but would not allow the possibility of this contingency to deter him from operating.

Joint and Cutaneous Metastases With Blenorrhea Neonatorum. J. PAULSEN.—Pure gonococcus metastases occurred in the joints of a 2-months babe, consecutive to gonorrheal ophthalmia. The skin around the affected joints became edematous, and finally exanthemata appeared, evidently due to invasion from the deeper tissues. One knee required operation and the gonococcus was found pure in the pus and in the surrounding exanthem. Complete restitution was obtained.

Tetanus and Intestinal Occlusion. KREY.—No serum was given in the severe case of traumatic tetanus reported. The case was complicated by acute occlusion from intussusception of the small intestine, requiring laparotomy. The tetanus continued its course for two weeks longer, and then gradually subsided.

Virchow's Archiv f. Path. Anat. (Berlin), July 7.

Criticism of Koch's Malarial Research. J. H. F. KOHLBRUGGE.—The author of this communication is privat docent of climatology and tropical diseases at Utrecht, and practiced medicine for many years in Java. He claims that Koch's assertions in regard to the immunity against malaria probably acquired in time by natives and foreigners contradict the experience of all practitioners in tropical countries. The longer the residence the more severe the attacks, as a rule. The weak die off and those who survive—of either native children or imported foreigners—are the congenitally more resistant, the élite of more or less naturally immune individuals. He also objects to Koch's deductions that because apes—"the animals closest to man"—proved refractory to malarial inoculations, it is scarcely probable that other animals will prove susceptible. Anthropoids, he points out, are far less close to man, toxicologically at least, than a number of other animals, especially dogs. He asks why Koch did not go to some true malaria-infested district in Java, such as the Djoewana coast, with its 222,000 inhabitants. The report from this district for 1899 stated that 22,000 persons were "down with malaria and the people are dying like rats." Practically the same report is received each year. The population scarcely changes, and it is evident that no immunity has been acquired. The *Deutsche Med. Wochenschrift*, which has published Koch's reports to the Imperial Health Bureau, has refused to insert this or Nuttall's critical articles in Koch's absence.

Wiener Klinische Rundschau, August 26.

Death After Resection of Jugular Vein. C. EWALD.—While a patient in Albert's clinic was having the pharynx and tongue resected, it was found necessary to resect the internal jugular vein on both sides. There was an anastomosis between the internal and anterior jugular veins on one side. The patient had been operated on in a half-sitting posture, and the operation lasted from thirty to forty-five minutes longer. When raised erect to apply the bandages he became cyanotic, but soon recovered. Placed in bed on an inclined plane—head downward—to prevent aspiration of the secretions, the pulse and respiration were normal, but in half an hour he became blue, and raising him erect had no effect. The color gradually returned to normal, but the heart action became weaker and, in spite of artificial respiration and other measures, death ensued in an hour. The face and trunk had become so pale that an internal hemorrhage was surmised, but none was discovered. The dura mater was found pale and the longitudinal sinus empty. The vena cava, portal vein and the viscera were gorged with blood, the heart in fatty degeneration. The brain was edematous and anemic. Ewald attributes the fatal termination to vasomotor disturbances. The cyanosis occasionally noted after resection of both internal jugular veins usually passes away spontaneously in a few days.

Transplantation of Flaps for Atresia Vaginae. S. G. SCHALITA.—The disadvantages of the usual methods of making a new vagina or curing defects are obviated by the method described by Schalita. He hollows out the passage and dilates it with a speculum for a day or so. Then he inserts a speculum with large fenestræ and applies flaps of mucous membrane taken from the labia or elsewhere to the exposed portions of the vaginal wall. A second plain speculum, a size smaller than the other, is introduced inside the first, to prevent the protrusion of the walls through the opening. Both are left undisturbed for a time and then replaced with a simple speculum. In a case described, the epithelium proliferated in all directions from the flaps, which, with scarcely an exception, healed perfectly in place.

Phosphorus Necrosis. J. LEVAI.—The arguments presented by Levai demonstrate that the necrosis of the bones in consequence of chronic intoxication with phosphorus is caused primarily by pathologic alterations in the vessels. The direct occasion of the necrosis is some external cause, usually an infection.

Wiener Klinische Wochenschrift, August 30.

Pathogenesis of Icterus. BROWICZ.—This communication summarizes the results of extensive clinical and experimental research, and was read at the Polish Medical Congress which met at Cracow, July 23. It attributes icterus to an increased functional activity of the normal liver cells, which, under the stimulus of various influences, take up immoderate quantities of food and function-material, especially hemoglobin, and work it over into an excessive output of bile, and of bile-pigment in particular. This excess of bile can be produced only by a normally active, healthy liver cell. The surplus secretion of bile passes into the intercellular biliary passages and is thence absorbed through the walls of the blood capillaries in the acini into the circulation. There is much less proportional absorption through the lymph vessels in the larger biliary passages. This conception of the increased function of normal liver cells and immoderate production of bile explains all varieties of icterus, even the most apparently diverse.

St. Petersburger Medicinische Wochenschrift, August 23.

Acute Polyarthritis Consecutive to Angina Lacunaris. WOLOSHINTSKY.—The parents, six children and the cook in a family in Riga passed through a house epidemic of angina lacunaris, and in three of the members acute or subacute articular rheumatism developed in three to six days. The author also had occasion to treat four cases of abortive acute articular rheumatism last year, occurring two to six days after the commencement of a typical angina lacunaris. He ranks the latter as an essential, morbid entity, with general and local symptoms, entirely distinct from the angina of scarlet fever, etc. Pyogenic cocci are always found in it. The joints may be the seat of suppurative processes in genuine articular rheumatism and the clinical picture of pyemia be superposed. In the same way, on the other hand, pure pyemic processes may appear simulating polyarthritis, and it is difficult, even at the autopsy, to determine the primary affection. The frequent complication of erysipelas with polyarthritis supports the assumption of the pyogenic etiology of articular rheumatism.

Anales de Oftalmologia (Mexico), August.

Experimental Study of the Minimum V'sual Angle. P. DE OBARRIO.—In an attempt to repeat and control Wuelfing's experiments and determine the influence of colors on the appreciation of the minimum angle, Obarrio has learned that the

minimum visual angle is much smaller than we have been accustomed to assume hitherto, also that the use of colors has no influence on the appreciation of this angle.

Change of Address.

L. C. Bacon, 556 Selby Ave., to 737 Fairmount St., St. Paul, Minn.
R. G. Barnsdale, 420 Main St., Stevens Point, to West Superior, Wis.
E. W. Baum, 3200 Wallace St., to 1129 Lill Ave., Chicago.
C. M. Beall, 1469, to 1259 Kenesaw Ave., Washington, D. C.
Maxwell Benjamin, 196 Alex. Ave., to 30 W. 126th St., New York City.
C. Bock, Petoskey, Mich., to Ft. Wayne, Ind.
Carl Booth, Barnes Medical College, to 3202 Pine St., St. Louis, Mo.
B. J. Callahan, Humboldt, to 521 Locust St., Des Moines, Iowa.
Julia W. Carpenter, Rock Ridge, Watch Hill, R. I., to 908 E. McMillan St., Cincinnati, Ohio.
G. W. Drake, Monteagle, Tenn., to Hollins, Va.
C. M. Dumm, 540 Shaw Ave., McKeesport, to Allegheny County Home, Woodville, Pa.
J. W. Duncan, Gay and Vine Sts., Knoxville, Tenn., to 101½ Whitehall St., Atlanta, Ga.
J. M. Elsenbise, Lawrence, to Fairview, Kan.
W. W. Fugitt, Denton, to Burtonville, Ky.
M. D. Gibbs, Altman, to Touraine, Col.
H. K. Gorsuch, 808 N. Carrollton Ave., to N. W. Cor. Biddle and McCulloch, Sts., Baltimore, Md.
S. P. Hart, Auburn, to Waverly, Ill.
D. M. Harvey, 419 Third St., to 195 S. Park St., San Francisco, Cal.
Edwin C. Hixon, Nonquitt, to 1174 Massachusetts Ave., Cambridge, Mass.
W. B. Holden, 42 Hanover, to 210 Kalamazoo St., Battle Creek, Mich.
H. P. Howard, Alexandria, to Lexington, Va.
T. V. Hubbard, Fitten Bldg., to Austell Bldg., Atlanta, Ga.
P. H. Irish, Brainerd, to Akely, Minn.
D. J. Jones, Lisbon, to Girard, Ohio.
H. H. Kleinpell, 213 S. Hoyne Ave., to 35 Rush St., Chicago.
N. S. Love, 4661 Maryland Ave., St. Louis, Mo., to Hotel Iroquois, New York City.
C. F. McGahan, Bethlehem, N. H., to Aiken, S. C.
J. B. Mears, Keller, to University of Virginia, Charlottesville, Va.
C. B. Miller, Scranton, to Vinland, Kan.
E. L. Mitchell, Roseville, to Monmouth, Ill.
Thor. Moeller, Hillsboro, to St. John, N. D.
J. H. Oakley, M. H. S., Queenstown, Ireland, to U. S. Marine-Hospital Service, Evansville, Ind.
W. J. Pinkerton, Ludlow, to 3912 Cottage Grove Ave., Chicago.
E. D. Piper, 2141 Jackson Boul., to 3521 S. Hermitage Ave., Chicago.
J. P. Prestley, 1273 VanBuren, to 1361 Harvard St., Chicago.
W. M. Reitzel, Bremen, to Waterville, Kan.
E. B. Rhodes, Vassar, to 36 Mt. Union St., E., Cleveland, Ohio.
G. F. Seaman, 209 19th St., to 315 Goldsmith Bldg., Milwaukee, Wis.
F. E. Sellers, Mauzy, to University of Virginia, Charlottesville, Va.
J. N. Shaff, 856 Polk St., to 766 N. Park Ave., Chicago.
E. A. Sherrer, San Carlos, to Ft. Grant, Ariz.
J. G. Spenzer, 341½ Prospect St., to 716 Rose Bldg., Cleveland, Ohio.
A. M. Underwood, Grove Beach, Conn., to Lancaster, Pa.
W. S. Wells, Ney, Ohio, to Adamsville, R. I.
Elizabeth White, St. Luke's Hospital, New York City, to Romney, W. Va.
L. D. Wilson, 12th St., to 1132 Chapline St., Wheeling, W. Va.
C. W. Womack, Tullahoma, Tenn., to S. A. F., College, San Antonio, Tex.
H. A. Wright, Linkville, Ore., to Wilbur, Wash.

Queries and Minor Notes.

ANXIOUS TO BE A QUACK.

The following is clipped from a Chicago newspaper; the last qualification, certainly, ought to get the position desired:

SITUATION WANTED—By physician with an advertising specialist; competent to conduct correspondence, hold the chair, and good fee-taker.

COMMISSION TO OPHTHALMIC SURGEONS.

ATLANTA, GA., Sept. 14, 1900.

To the Editor:—Six years ago, when I began the practice of ophthalmology in this city, the leading optical house approached me with the proposition that if I would send to them all of my prescription work they would allow me one-third of the amount paid them by the patient on each prescription, and at the end of the month send me a check on this basis for the number of prescriptions received. I immediately declined such an offer on the grounds that it was dishonest to make the patient pay me twice; rather preferring the reduction should be made in favor of the patient at the time of purchasing the glasses. This rule I have strictly adhered to, although the opticians will not give this reduction to the purchaser, claiming that they cannot afford to have two prices for customers. This same optical house has recently told me that such a contract between oculist and optician is practiced in all the large cities, as New York and Chicago, and this, too, by the leading men in the profession. I should certainly like to know the truth of this statement and whether such practices are considered ethical DUNBAR ROY.

ANS.—The above query was submitted to Dr. Casey A. Wood, editor of the *Ophthalmic Record*, who sends the following reply:

"Dr. Dunbar Roy's query may, so far as it relates to the city of Chicago, be safely answered in the negative. It is not a common practice for the optician to pay the ophthalmic surgeon a commission on glasses furnished by him, nor would such a practice be considered ethical. I believe I am voicing the sentiment of the profession in this city when I say that such a doubtful method could not be generally practiced and be long kept a secret. A number of perfectly reputable ophthalmologists furnish glasses to their patients just as certain other physicians dispense their own drugs, and doubtless there are arguments that may be advanced in favor of this plan, but I am not acquainted with a single confrère who is willing to defend the practice of accepting commissions from the optician. If one exists, Dr. Roy's note furnishes an excellent opportunity for him to come forward and show cause for such conduct. CASEY A. WOOD, M.D."

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., August 29 to September 4, 1900, inclusive:

William F. Bernart, acting asst.-surgeon, relieved from duty at the Army and Navy General Hospital, Hot Springs, Ark., for annulment of contract.

George M. Bradfield, acting asst.-surgeon, previous orders revoked; on being relieved by Acting Asst.-Surgeon Harold W. Cowper, he will proceed to Philadelphia, Pa., for annulment of contract.

Henry R. Carter, Jr., acting asst.-surgeon, relieved from the Department of the Columbia for assignment with troops going on foreign service.

Harold W. Cowper, acting asst.-surgeon, from the Department of Porto Rico to Fort Ontario, N. Y., to relieve Acting Asst.-Surgeon Bradfield.

Joseph J. Curry, acting asst.-surgeon, now at Zanesville, Ohio, on the expiration of his present sick leave to duty at the Army and Navy General Hospital, Hot Springs, Ark.

Orlando Ducker, major and surgeon, U. S. Vols., honorably discharged from service, to take effect September 30, 1900.

Thomas G. Holmes, acting asst.-surgeon, from Fort Wright, Wash., to accompany Cops. "B" and "M," 24th U. S. Infantry, to Manila, P. I.

David J. Johnson, acting asst.-surgeon, previous orders revoked.

Henry S. Kilbourne, major and surgeon, U. S. A., member of a board to prepare a comprehensive plan for the location of new buildings, roads and walks at Fort Hamilton, N. Y.

Elmer E. Mansfield, acting asst.-surgeon, from Wilmer to San Antonio, Tex., for duty with the 25th U. S. Infantry under orders for foreign service.

William E. Richards, lieutenant and asst.-surgeon, U. S. A., previous orders revoked; leave of absence granted.

William J. S. Stewart, acting asst.-surgeon, from Vineyard Haven, Mass., to Fort Slocum, N. Y., to accompany recruits to the Philippine Islands.

Charles K. Winne, major and surgeon, U. S. A., from Fort Crook, Nebr., to duty at Fort Porter, N. Y.

Marshall W. Wood, major and surgeon, U. S. A., leave of absence granted.

The following acting assistant-surgeons have been directed to proceed from the places designated to San Francisci, Cal., for assignment to duty with troops destined for foreign service: Charles L. Baker, Duffield, West Va.; John L. Burkart, Grand Rapids, Mich.; Max F. Clausius, Barrington, Ill.; Samuel C. Lindsay, Salineville, Ohio; Irvine W. Patton, Huntsville, Ala.; George M. Ekwurzel, Philadelphia, Pa.; Charles A. Ross, Leopold, Ind.; Charles R. Reynolds, Philadelphia, Pa.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy for the week ending Sept. 8, 1900:

Asst.-Surgeon E. V. Armstrong, granted sick leave for one month.

P. A. Surgeon C. M. DeValin, ordered to additional duty at the navy yard, Portsmouth, N. H.

Asst.-Surgeon A. G. Grunwell, detached from the *Monocacy* and ordered to the *Brooklyn* by commander-in-chief of Asiatic Station.

Asst.-Surgeon T. M. Lippitt, detached from the *Newark* and ordered to the *Monocacy*.

Surgeon A. C. H. Russell, detached from the naval hospital, Yokohama, Japan, and ordered to proceed home and to wait orders.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers for the U. S. Marine-Hospital service for the seven days ending Sept. 6, 1900:

Surgeon D. A. Carmichael, detailed as chief quarantine officer Territory of Hawaii.

Surgeon J. H. White, to proceed to New York City, for special temporary duty.

P. A. Surgeon A. R. Thomas, relieved from duty at London, England, and assigned to duty in the office of the U. S. consul at Glasgow, Scotland.

Asst.-Surgeon C. H. Lavinder, detailed as chief quarantine officer of Porto Rico.

Asst.-Surgeon J. F., Anderson, relieved from duty at Vienna, Austria, and assigned to duty in the office of the U. S. Consul-General at London, England.

Asst.-Surgeon J. W. Kerr, relieved from duty at Honolulu, H. I., and directed to proceed to Hongkong, China, for duty in the office of the U. S. consul.

Asst.-Surgeon G. M. Corput, granted five days' extension of leave of absence.

Hospital Steward E. S. Maguire, upon being relieved by Hospital Steward Charles Miller, to proceed to Fort Stanton, N. M., and report to medical officer in command for duty and assignment to quarters.

Hospital Steward Charles Miller, relieved from duty at Detroit, Mich., and directed to proceed to New York (Stapleton) and report to medical officer in command for duty and assignment to quarters.

Hospital Steward C. H. Woods, relieved from duty at Cairo, Ill., and directed to proceed to Chicago, Ill., and report to medical officer in command for duty and assignment to quarters.

Hospital Steward H. V. LaGrange, on expiration of leave of absence relieved from duty at Fort Stanton, N. M., and directed to proceed to Cairo, Ill., and report to medical officer in command for duty and assignment to quarters.

Hospital Steward Edward Rogers, upon being relieved by Hospital Steward C. H. Woods, to proceed to Detroit, Mich., and report to medical officer in command for duty and assignment to quarters.

Hospital Steward Mark H. Watters, directed to report to medical officer in command at Chicago, Ill., for temporary duty and assignment to quarters.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Sept. 8, 1900:

SMALLPOX—UNITED STATES

Alaska: Nome, Aug. 11, 6 cases.
Louisiana: New Orleans, Aug. 25-Sept. 1, 4 cases, 1 death.
Minnesota: Minneapolis, Aug. 18-25, 2 cases; Winona, Aug. 21-28, 2 cases.
Ohio: Cleveland, Aug. 26-Sept. 1, 9 cases; Portsmouth, Aug. 26-Sept. 1, 3 cases.
Utah: Salt Lake City, Aug. 19-Sept. 1, 4 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Aug. 11-18, 1 case.
Brazil: Pernambuco, July 1-15, 1 death.
England: Liverpool, Aug. 11-18, 2 cases.
France: Paris, Aug. 5-18, 5 deaths.
Gibraltar: Aug. 12-19, 1 case.
India: Calcutta, July 28-Aug. 4, 10 deaths; Madras, July 28-Aug. 3, 2 deaths.
Japan: Formosa, June 1-30, 39 cases, 3 deaths.
Mexico: City of Mexico, Aug. 19-26, 8 cases, 1 death; Vera Cruz, Aug. 19-Sept. 1, 2 deaths.
Russia: Moscow, Aug. 5-11, 4 cases; Odessa, Aug. 11-18, 8 cases, 5 deaths; Warsaw, Aug. 4-11, 6 leaths.
Scotland: Dundee, Aug. 19-25, 1 case; Glasgow, Aug. 17-24, 28 cases.
Spain: Corunna, Aug. 11-18, 1 death; Madrid, July 28-Aug. 11, 63 deaths.

YELLOW FEVER

Colombia: Bocas del Toro, Sept. 1, 1 case; Cartagena, Aug. 3-17, 3 cases, 3 deaths; Panama, Aug. 20-27, 3 cases, 1 death.
Cuba: Batabona, Aug. 18-25, 1 case; Havana, Aug. 15-20, 9 cases.
Mexico: City of Mexico, Aug. 19-26, 1 death; Vera Cruz, Aug. 19-Sept. 1, 23 deaths.
West Africa: Dakar, Aug. 15, 14 cases; St. Louis, Aug. 15, 24 cases, 2 deaths.

CHOLERA

India: Calcutta, July 28-Aug. 4, 18 deaths; Madras, July 27-Aug. 3, 13 deaths.
Japan: Yokohama, July 28-Aug. 4, 1 case.

PLAGUE

China: Amoy, July 7-28, 1150 deaths: Hongkong, July 14-28, 78 deaths.
India: Calcutta, July 28-Aug. 4, 41 deaths.
Japan: Formosa, June 1-July 26, 167 cases, 135 deaths.
Philippines: Manila, July 10-17, 1 death.
Straits Settlements: Singapore, July 14-21, 1 death.

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